

TECHNICAL FISHERY REPORT 95-02



Alaska Department of Fish and Game
Commercial Fisheries Management
and Development Division
P.O. Box 25526
Juneau, Alaska 99802-5526

August 1995

Abundance, Age, Sex, and Size of Chinook Salmon Catches and Escapements in Southeast Alaska in 1988

by

Mark A. Olsen

The Technical Fishery Report Series was established in 1987, replacing the Technical Data Report Series. The scope of this new series has been broadened to include reports that may contain data analysis, although data oriented reports lacking substantial analysis will continue to be included. The new series maintains an emphasis on timely reporting of recently gathered information, and this may sometimes require use of data subject to minor future adjustments. Reports published in this series are generally interim, annual, or iterative rather than final reports summarizing a completed study or project. They are technically oriented and intended for use primarily by fishery professionals and technically oriented fishing industry representatives. Publications in this series have received several editorial reviews and at least one *blind* peer review refereed by the division's editor and have been determined to be consistent with the division's publication policies and standards.

ABUNDANCE, AGE, SEX, AND SIZE OF CHINOOK SALMON
CATCHES AND ESCAPEMENTS IN SOUTHEAST ALASKA IN 1988

By

Mark A. Olsen

Technical Fishery Report 95-02

Alaska Department of Fish and Game
Commercial Fisheries Management
and Development Division
P.O. Box 25526
Juneau, Alaska 99802-5526

August 1995

AUTHOR

Mark Olsen is a research biologist in charge of chinook catch and escapement reporting and scale aging for the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division, P.O. Box 241014, Douglas, AK 99824-0020.

ACKNOWLEDGMENTS

A number of people assisted in the collection of abundance, age, sex, and size data used in this report. Commercial Fisheries Division employees of the Alaska Department of Fish and Game (ADF&G) assisted in collecting catch and escapement samples. Scott McPherson, Andy McGregor, Karl Hofmeister, Jan Weller, Demarie Wood, Gary Lebowitz, Cathy Robinson, and Brian Lynch supervised sampling efforts. John E. Clark and Scott McPherson developed the computer programs used to summarize the age, sex, and size data. Andy McGregor (ADF&G) and Pat Milligan, Canadian Department of Fisheries and Oceans (CDFO), supervised the sampling of chinook salmon caught by fish wheel gear in the lower Taku River. Escapement counts and age, sex, and size data were provided for returns to Crystal Lake Hatchery by Bob Zorich (ADF&G, Fisheries Rehabilitation, Enhancement and Development [FRED] Division), to Deer Mountain Hatchery by Carol Denton (FRED), and Ron Josephson (FRED) provided samples from King Salmon River and Snettisham Hatchery. Escapements to Little Port Walter Hatchery were provided by Frank Thrower (National Marine Fisheries Service, Auke Bay Laboratory). Pat Milligan and Peter Etherton (CDFO) provided data for some of the Canadian escapement samples. Paul Suchanek provided the sport fish age compositions. Marla Trollan prepared the final manuscript. Ben Van Alen, Keith Pahlke, and Scott McPherson provided editorial reporting policy expertise.

PROJECT SPONSORSHIP

This investigation was partially financed with Anadromous Fish Conservation Act (P.L. 89-304 as amended) funds under Grant No. NA88-ABD-00304, and with U.S./Canada Pacific Salmon Treaty funds under Cooperative Agreement NA88-ABH-00045.

TABLE OF CONTENTS

	<u>Page</u>
LIST OF TABLES	v
LIST OF FIGURES	vii
LIST OF APPENDICES	viii
ABSTRACT	xi
INTRODUCTION	1
METHODS	2
Data Sources and Collection	2
Collecting Harvest Statistics	2
Enumerating Escapement Counts	3
Compiling Age, Sex, and Length Statistics	3
Analysis Strata	5
Troll Harvest Stratification	6
Stratification of the Seine, Gillnet, Trap, Sport, and Subsistence	
Harvests	7
Escapement Sampling Distribution	7
RESULTS	8
Fishery Overview	8
Harvest Statistics	9
Numbers and Landed Weight	9
Troll	10
Terminal Common Property	11
Seine	11
Drift Gillnet	11
Set Gillnet	11
Trap	11
Subsistence	12
Canadian Inriver Gillnet	12
Sport	12
Historical Data	12

TABLE OF CONTENTS (Continued)

	<u>Page</u>
Age, Sex, and Length Data	12
Troll	13
Seine	13
Drift Gillnet	13
Sport	14
Escapement Statistics	14
Numbers of Fish	14
Age, Sex, and Length	14
Stock Composition	15
LITERATURE CITED	16
TABLES	21
FIGURES	62
APPENDIX	65

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Harvest of chinook salmon in Southeast Alaska, 1988	21
2. Hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	22
3. Power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	24
4. Hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	26
5. Harvest of chinook salmon in the Southeast Alaska experimental troll fisheries directed at Alaska hatchery fish, 1988	28
6. Terminal and cost recovery harvests of chinook salmon in Southeast Alaska, 1988	28
7. Purse seine harvest of large chinook salmon (≥ 28 in) in Southeast Alaska by district and statistical week, 1988	29
8. Purse seine harvest of small chinook salmon (< 28 in) in Southeast Alaska by district and statistical week, 1988	29
9. Gillnet harvest of chinook salmon in Southeast Alaska by district and statistical week, 1988	30
10. Canadian inriver harvests of chinook salmon from the Alsek, Taku, and Stikine Rivers, 1988	31
11. Sport harvest of chinook salmon in Southeast Alaska, 1988	32
12. Age composition of chinook salmon in the Southeast Alaska winter troll harvest, 1987 to 1988	33
13. Age composition of chinook salmon in the Southeast Alaska summer troll harvest, 1988	36
14. Test for significant changes among periods in the age composition of chinook salmon in the summer troll catch by age class, 1988	38
15. Age composition of chinook salmon sampled from the spring experimental troll fishery in Southeast Alaska, 6–28 June 1988	39

LIST OF TABLES (Continued)

<u>Table</u>	<u>Page</u>
16. Mean length-at-age for chinook salmon harvested in the Southeast Alaska winter troll fishery, 1987 to 1988	40
17. Mean length-at-age for chinook salmon harvested in the Southeast Alaska summer troll fishery, 1988	43
18. Test for significant changes among periods in the length composition of chinook salmon in the summer troll catch by age class, 1988	45
19. Mean length-at-age for chinook salmon sampled from the spring experimental troll fishery in Southeast Alaska, 6-28 June 1988	45
20. Age composition of chinook salmon in the Southeast Alaska purse seine harvest by district, 1988	46
21. Mean length-at-age for chinook salmon harvested in the Southeast Alaska purse seine fishery by district, 1988	46
22. Age composition of chinook salmon in the Southeast Alaska gillnet harvest by district, 1988	47
23. Mean length-at-age for chinook salmon harvested in the Southeast Alaska gillnet fishery by district, 1988	47
24. Age composition of chinook salmon from selected Southeast Alaska sport fisheries, 1988	48
25. Mean length (tip-of-snout to fork-of-tail)-at-age, by sex, for chinook salmon from selected Southeast Alaska sport fisheries, 1988	50
26. Peak escapement estimates and weir counts for chinook salmon in Southeast Alaska and transboundary rivers, 1988	52
27. Estimated total escapement of large (age-.3 or older) chinook salmon to Southeast Alaska and transboundary river natural runs, 1988	54
28. Age composition of chinook salmon from escapements to Southeast Alaska and transboundary rivers, 1988	55
29. Mean length-at-age (by sex) for chinook salmon from escapements to Southeast Alaska and transboundary rivers, 1988	58
30. Southeast Alaska commercial troll, seine, and gillnet harvest of chinook salmon freshwater aged 0., 1988	61

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. Map of Southeast Alaska showing the statistical fishing districts and the four quadrants used for analysis of the troll data, 1988	62
2. Number of days open for chinook salmon fishing and days of non-retention of chinook salmon in Southeast Alaska summer troll seasons, 1978 to 1988	63
3. Percentage of age-1. chinook salmon in the Southeast Alaska troll harvest by quadrant, 1 October 1987 to 12 July 1988	64

LIST OF APPENDICES

Page

APPENDIX A: POUNDS, AVERAGE WEIGHT, NUMBER OF BOATS, CATCH PER BOAT

A.1.	Sample size required for approximate 90% or 95% simultaneous confidence intervals with precision $\pm 5\%$ for age compositions	67
A.2.	Hand and power troll harvest in pounds of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	68
A.3.	Power troll harvest in pounds of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	70
A.4.	Hand troll harvest in pounds of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	72
A.5.	Average weight (lb) of chinook salmon harvested in Southeast Alaska by combined hand and power troll gear by district and statistical week, 1 October 1987 to 16 July 1988	74
A.6.	Average weight (lb) of chinook salmon harvested in Southeast Alaska by power troll gear by district and statistical week, 1 October 1987 to 16 July 1988	76
A.7.	Average weight (lb) of chinook salmon harvested in Southeast Alaska by hand troll gear by district and statistical week, 1 October 1987 to 16 July 1988	78
A.8.	Number of boats that fished in the combined hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	80
A.9.	Number of boats that fished in the power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	82
A.10.	Number of boats that fished in the hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	84
A.11.	Catch per boat in the combined hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	86

LIST OF APPENDICES (Continued)

		<u>Page</u>
A.12.	Catch per boat in the power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	88
A.13.	Catch per boat in the hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988	90
A.14.	Purse seine harvest in pounds of large chinook salmon (≥ 28 in) in Southeast Alaska by district and statistical week, 1988	92
A.15.	Purse seine harvest in pounds of small chinook salmon (< 28 in) in Southeast Alaska by district and statistical week, 1988	92
A.16.	Average weight (lb) of large chinook salmon (≥ 28 in) harvested in Southeast Alaska by purse seine gear by district and statistical week, 1988	93
A.17.	Average weight (lb) of small chinook salmon (< 28 in) harvested in Southeast Alaska by purse seine gear by district and statistical week, 1988	93
A.18.	Number of boats that fished in the Southeast Alaska purse seine fishery by district and statistical week, 1988	94
A.19.	Catch per boat by week of large chinook salmon (≥ 28 in) in the Southeast Alaska purse seine fishery by district and statistical week, 1988	94
A.20.	Gillnet harvest in pounds of chinook salmon in Southeast Alaska by district and statistical week, 1988	95
A.21.	Average weight (lb) of chinook salmon harvested in Southeast Alaska by gillnet gear by district and statistical week, 1988	96
A.22.	Number of boats that fished in the Southeast Alaska chinook salmon gillnet fishery by district and statistical week, 1988	97
A.23.	Catch per boat in the Southeast Alaska chinook salmon gillnet fishery by district and statistical week, 1988	98

APPENDIX B: WEIR COUNTS

B.1.	Little Tahltan River (108-80-120) weir count for chinook salmon, 1988	101
------	---	-----

LIST OF APPENDICES (Continued)

	<u>Page</u>
B.2. King Salmon River (111-17-010) weir count for chinook salmon, 1988	102
B.3. Little Tatsamenie Lake (111-32-254) weir count for chinook salmon, 1988	103
B.4. Hackett River (111-32-260) weir count for chinook salmon, 1988	104
B.5. Klukshu River (182-30-020) weir count for chinook salmon, 1988	105
B.6. Situk River (182-70-010) weir count for chinook salmon, 1988	106

APPENDIX C: HISTORICAL DATA

C.1. Historical catches and migratory timing statistics of chinook salmon harvested in the winter and summer troll fisheries, 1960–1988	109
C.2. Southeast Alaska Region annual commercial chinook salmon catches by gear, in numbers and percent, 1960–1988	111
C.3. Historical value of the Southeast Alaska chinook salmon fisheries, 1977–1988	112
C.4. Estimates of total escapements of chinook salmon to escapement indicator systems to Southeast Alaska and transboundary rivers, 1975–1988	114

APPENDIX D: AGING CRITERIA

D.1. Criteria for determining freshwater age of chinook salmon	117
--	-----

ABSTRACT

A total of 276,457 chinook salmon *Oncorhynchus tshawytscha* Walbaum were harvested in Southeast Alaska and Yakutat during the 1987–1988 winter troll fishery and 1988 summer troll, seine, gillnet (drift and set), sport, and subsistence fisheries. The summer troll fishery catch of 170,780 chinook salmon represented 62% of the total harvest and most were caught in outer coastal waters. The winter troll fishery harvested 56,129 chinook salmon. Purse seiners harvested 11,077 chinook salmon and drift gillnet fishermen harvested 9,386. Yakutat set gillnet fishermen harvested 893 fish. The Southeast Alaska sport harvest totaled 24,787 chinook salmon and the Canadian sport harvest on the Alsek River totaled 249. Small harvests were taken by the Canadian commercial gillnet fisheries on the Taku (555 fish) and Stikine (1,192 fish) Rivers, by Alaskan subsistence fishermen (94 fish), and by Canadian Indian food fishermen on the Stikine (1,178 fish) and Alsek (43 fish) Rivers. The estimated total Southeast Alaska chinook escapement of .3-age fish or older was 60,743.

Commercial troll, seine, and gillnet catches were apportioned into age and length groups based on available sample data. The age and length composition of winter and summer troll harvests were summarized by sampling period for four areas of Southeast Alaska. Age, sex, and length data are also presented for sport fisheries and for escapements to 21 rivers or tributaries and 5 hatcheries in the region. There were differences in chinook age compositions of commercial harvests by gear type, area, and time. Most of the fish harvested in the summer troll (74.8%) and seine (85.5%) fisheries had gone to sea during the first year of life (age 0.), while only 9.0% of the fish sampled from the gillnet fisheries and 46.0% of the fish sampled from the winter troll fisheries were age 0. The percentage of age-0. fish in the summer troll fishery was highest in the outer coastal areas (80.9%) and lowest in inner coastal areas (43.6%). Age-0.3 and -0.4 fish were most common in the outer coastal areas, while fish aged 0.3 and 1.3 dominated the inner coastal summer troll fisheries. Age-1. chinook salmon predominated samples from Alaskan wild and hatchery returns. Age-composition analysis revealed that virtually all of the 160,824 age-0. fish harvested in the troll and net fisheries were of non-Alaskan origin.

KEY WORDS: Catch allocation, age composition, chinook salmon, *Oncorhynchus tshawytscha*, fishery synopsis, Southeast Alaska, catch and escapement

INTRODUCTION

The management of Southeast Alaska's chinook salmon *Oncorhynchus tshawytscha* Walbaum fisheries is complicated by high user demand for a generally depressed resource harvested in highly mixed stock fisheries. Natural and hatchery chinook stocks originating from Oregon to Alaska have been shown to contribute to the fisheries of Southeast Alaska (Parker and Kirkness 1956; Clark et al. 1985). Chinook salmon are harvested in commercial, sport, and subsistence fisheries in Southeast Alaska; however, the majority have historically been taken by the commercial troll fleet during the summer fishing season. Annual commercial catches from all gear types during the past 10 years have averaged about 290,000 fish. These harvests are considerably lower than catches between 1920 and 1950, which averaged 540,000 fish annually (ADF&G 1989b). Since 1981 Southeast Alaska fisheries have been managed so that the annual catch falls within guideline harvest levels established by the Alaska Board of Fisheries, the North Pacific Fisheries Management Council, and since 1984, by the Pacific Salmon Commission under the terms of the U.S./Pacific Salmon Treaty. A major intent of the treaty is to rebuild depressed natural runs of chinook salmon in Southeast Alaska by 1995 (15 years from implementation or roughly 3 life cycles) and coastwide by 1998. Annual assessment of the magnitude and age, sex, and size composition of chinook salmon catches and escapements is needed to establish and evaluate management strategies intended to achieve treaty goals. In addition, this information helps establish domestic management policies intended to optimize escapements and harvests and equitably allocate the resource between user groups.

The objective of this report is to document available data regarding the magnitude and composition by age, sex, weight, and length of catches and escapements of chinook salmon in Southeast Alaska during 1988. We also estimate the minimum number of non-Alaskan and maximum number of Alaskan-origin chinook salmon (including transboundary river stocks for which proprietorship is shared between Alaska and Canada under the U.S./Canada Pacific Salmon Treaty) that are harvested in the summer troll, seine, and gillnet fisheries. This report is intended to present baseline data; interpretation and discussion of the data is limited. Data pertaining to the transboundary river stocks were collected in cooperation with the Canadian Department of Fisheries and Oceans (CDFO).

This report complements prior reports on the abundance, age, sex, and size composition of chinook salmon catches and escapements in Southeast Alaska in 1981 (McGregor and Van Alen 1987), 1982 (Van Alen and Wood 1983), 1983 (Van Alen et al. 1986), 1984 (Van Alen and Olsen 1986), 1985 (Van Alen et al. 1987), 1986 (Van Alen et al. 1990), and 1987 (Olsen 1992). McBride and Wilcock (1983) documented available data on abundance and age compositions of chinook salmon catches and escapements for the years 1961 to 1980. Detailed information on catches and escapements of chinook salmon in the Yakutat area in 1988 are reported in Rowse (1990b). A complete summary of regulations affecting Southeast Alaskan fisheries may be found in ADF&G (1988). Alaska Department of Fish and Game (ADF&G) reports to the Alaska Board of Fisheries summarize the 1988 troll and net fishing seasons (ADF&G 1989b).

The Southeast Alaska Region consists of the coastal waters and inland drainages of Southeast Alaska from Cape Suckling on the north to Dixon Entrance on the south; this report covers fisheries throughout the

region, excluding the Yakutat Management Area inshore setnet fisheries in Districts 182, 183, 185, and 192 (Figure 1). Rowse (1990b) provides detailed data on Yakutat area catches and escapements in 1988. The region is divided into 20 coastal (101 through 116, 181, 183, 186, and 191) and 6 offshore (150, 152, 154, 156, 157, and 189) fishing districts. Chinook salmon were commercially harvested by trollers in all districts except 186 and 191, by seiners in Districts 101 to 105, 109, 110, and 112 to 114, by drift gillnet fishermen in Districts 101, 102, 106, 108, 111, and 115, and by set gillnet fishermen in Districts 182 and 183. Chinook salmon were also commercially caught in the Canadian gillnet fisheries on the lower Taku and Stikine Rivers. Sport fishing occurs throughout the region but is concentrated around larger communities. Subsistence fishing in Alaska was only permitted in the Chilkat River adjacent to the Klukwan Reserve and in some rivers in the Yakutat area by local Yakutat residents. Small Indian food fishery catches were also reported from the Canadian portion of the Stikine River near Telegraph Creek and from Alsek River tributaries.

METHODS

Data Sources and Collection

Collecting Harvest Statistics

Alaskan commercial catch data (catch, number of boats, and total weight of chinook salmon sold by gear type, district, and week) were compiled by the ADF&G's former Division of Commercial Fisheries, now referred to as the Commercial Fisheries Management and Development Division. These data were based on computer tabulations of individual sales slips (fish tickets) as of 11 September 1991. Because of the possibility that all imbedded data entry or recording errors were not corrected, subsequent data summaries may differ slightly from those used in this report. Such errors have been generally found to be too small to be of consequence to our estimates of commercial catches by gear type, area, and time. The average weights of troll-caught fish were based on dressed (gilled and gutted) fish, but the seine and gillnet fisheries landed both dressed and undressed (round) fish.

Canadian commercial, sport, and food fishery catch statistics for the Taku, Stikine, and Alsek Rivers were provided by CDFO Whitehorse staff. Catch data provided by CDFO were factored into two size classes, small and large. A small fish was defined as <5 lb (11 kg) or <500 mm in fork length and age .2 or less; large fish included all others.

Alaskan sport catches were estimated based on mailout questionnaire surveys of randomly selected Alaskan sport fishing licenses (Mills 1989). Alaskan subsistence catch information was tabulated from subsistence permits returned to ADF&G.

Enumerating Escapement Counts

Several methods were used to obtain estimates of spawning population size. Among them were counts from airplanes, helicopters, and boats, counts made on foot surveys, counts of upstream migrants passing through weirs, and counts of carcasses that drifted downstream against weirs. An effort was made to survey most of the important spawning areas. For several streams, multiple surveys were made. We reported only the highest daily count for these streams unless weir counts of the total escapement were also available. Helicopter surveys of transboundary rivers were done cooperatively between CDFO and the ADF&G Sport Fish Division. Age-0, -1, and -2 chinook salmon ("jacks") were not counted in the aerial surveys because their small size made them difficult to see and to distinguish from other salmon species. The mean date of migration and associated migratory timing statistics were calculated for chinook salmon passing through weirs according to methods described by Mundy (1984).

There are 34 documented chinook salmon-producing systems in Southeast Alaska (including Yakutat). The Taku, Stikine, and Alsek Rivers are considered major producers with current or potential annual returns of more than 10,000 non-jack (age-3 and older) chinook salmon, 9 rivers are considered medium producers with potential returns of 1,500 to 10,000 chinook salmon, and 22 rivers are considered minor producers with annual returns of less than 1,500 chinook salmon (Kissner and Hubartt 1986).

Eleven "index" rivers are surveyed annually to obtain peak escapement estimates of age-3 or older fish. The 11 index systems include the 3 major producers, 7 medium producers (Situk, Chilkat, Andrews, Unuk, Chickamin, Blossom, and Keta Rivers), and 1 minor producer (King Salmon River; ADF&G 1989b).

Compiling Age, Sex, and Length Statistics

Summer troll, seine, and gillnet catches of chinook salmon were sampled by ADF&G employees stationed at the Southeast Alaska ports of Craig, Ketchikan, Petersburg, Wrangell, Sitka, Juneau, Excursion Inlet, Pelican, Hoonah, Hydaburg, Port Alexander, Kake, and Yakutat. Sampling was also conducted at several smaller buying stations, aboard tenders, and aboard troll vessels participating in the chinook salmon mortality assessment program (Seibel et al. 1989). Sampling of winter troll catches was limited to the ports of Ketchikan, Petersburg, Sitka, Craig, Wrangell, Hoonah, and Juneau from 1 October to 30 December 1987 and from 5 January to 15 April 1988. Sampling was conducted on fish landed by tenders of both the net and troll fisheries and from individual fishing vessel landings. Chinook salmon caught in the 1988 spring troll experimental fishery were also sampled for length and age.

Three scales obtained from the preferred area of each fish (INPFC 1963) were mounted on gum cards and impressions were made in cellulose acetate (Clutter and Whitesel 1956). Age was determined by visual examination of scale impressions under moderate (57x) magnification as described by Van Alen and Wood (1983). Ages are reported in European notation (note that ocean ages are recorded according to the calendar date that the fish was caught to calculate the correct brood year; i.e., an age-1.3 fish on 31 December is an age-1.4 fish on 1 January). Ages were verified on all fish with accompanying coded microwire tag (CWT) mark-release data. If a scale was unageable and the fish was microwire tagged, the

CWT age was recorded. Aging criteria developed by Van Alen and McPherson (ADF&G, Commercial Fisheries Division, Douglas) were used to estimate freshwater ages of catch and escapement chinook scales (Appendix D.1).

All lengths were measured from mid-eye to fork-of-tail to the nearest half centimeter, except for the Southeast Alaska sport-caught fish which were measured from the tip-of-snout to fork-of-tail. Sexual dimorphism was used to determine sex of fish sampled in escapements. Sex was not determined for fish sampled from the commercial catch because secondary sexual characteristics were not present and most fish were dressed at time of delivery.

Some difficulties were encountered in representatively sampling the commercial catch because sampling occurred at processing facilities where fish were usually sorted by size: usually small (<9 lb), medium (9 to 11 lb), and large (>11 lb). They were also sorted by quality (two grades) and flesh color (red or white). To avoid obtaining biased samples if the entire delivery could not be sampled, fish were either sampled from each sorting bin in proportion to abundance, or they were sampled at a predetermined frequency for each sorting bin.

Scale, sex, and length data were obtained from carcasses or live, post-spawn fish during foot surveys in the Carroll, Chickamin (Barrier Creek, Clear Creek, Leduc Creek, South Fork, Humpy Creek, Butler Creek, and Indian Creek), Unuk (Eulachon River, Clear Creek, Genes Lake Creek, and Cripple Creek), Nahlin, and Nakina (carcass weir) Rivers. Prespawners were sampled at weir sites on the Naha, Little Tahltan, King Salmon, Tatsamenie, Klukshu, and Situk Rivers and at Deer Mountain, Crystal Lake, Little Port Walter, Snettisham, and Medvejie Hatcheries. Chinook salmon were captured using fish wheel gear at Canyon Island in the lower Taku River (McGregor and Clark 1989).

The age distribution and associated standard errors were calculated by period for systems with weirs and by system for the remainder. Mean length and its standard error were calculated for each area, period, and age class.

In the Nakina River, length and sex were recorded for all carcasses encountered (i.e., a representative sample of the escapement), and scales were subsampled from each 25-mm length and sex group. The number of fish measured within each 25-mm length group was then assigned into age classes based on the age composition of the fish in that length group. Finally, we summed across length groups within each age and sex stratum which yielded the estimated age composition of all fish measured.

The formula used to calculate the age composition (by sex) of the fish measured for length was

$$N_i = \sum_j \left(\frac{S_{ij}}{\sum_j S_j} * L_j \right),$$

where

- i = age class,
- j = length group,
- S_{ij} = number of fish sampled for scale (age) data of age i in length group j ,
- S_j = number of fish sampled for scale data in length group j ,
- L_j = number of fish sampled for length data in length group j , and
- N_i = number of fish sampled for length data of age i .

The formula used to calculate weighted mean lengths (by sex) of fish sampled for length within each age class was

$$\bar{m}_i = \sum_{j=1}^J \frac{(N_{ij} * m_j)}{N_i},$$

where

- N_{ij} = number of fish sampled for length data of age i and length group j ,
- m_j = mid-point of length group j , and
- \bar{m}_i = weighted mean length of fish sampled for length data of age i .

The formula used to calculate the standard error of mean lengths (by sex) of fish sampled for length of each age class was

$$SE \bar{m}_i = \sqrt{\frac{\sum_{j=1}^J (n_{ij} * (m_j - \bar{m}_i)^2)}{\left(\sum_{j=1}^J N_j\right) - 1}}.$$

Analysis Strata

Three factors determined the development of sampling and analysis strata for age, sex, and length data: (1) logistic and cost considerations, as well as tradeoffs required to obtain samples over such a broad geographic region; (2) decisions to treat principal gear types (troll, seine, gillnet, and sport) separately and to examine the data for temporal trends; and (3) to maintain a 90% chance that our estimate of the percentage of a given age class in each gear-area-time strata did not exceed $\pm 5\%$ of the true value. We used the equations of Thompson (1987), corrected for finite population size (Appendix A.1), and computed the desired sample size for a strata assuming seven age classes would occur in the 1988 returns.

Troll Harvest Stratification

Although the district fished is recorded on sales slips, the accuracy of these data is suspect for the summer troll fishery. The troll fleet is highly mobile and tends to concentrate in areas of fish abundance. These areas often cross statistical district boundaries; e.g., a popular trolling area is Cross Sound and trollers in this area may actually fish in three districts (113, 114, and 116) between landings. Sample data for age and length composition often come from vessels that have individually fished such district combinations or from a tender servicing similar fisheries. For these reasons, we pooled statistical districts into larger areas to report harvests and to characterize age and size compositions.

Based upon the results of skipper interviews, we identified four areas or quadrants for which only minor cross-area reporting occurs during the summer fishery: (1) Northwest, composed of Districts 113, 114, 116, 150, 154, 156, 157, 181, 183, 186, 189, 191, and 192; (2) Southwest, composed of Districts 103, 104, and 152; (3) Northeast, composed of Districts 109, 110, 111, 112, 114, and 115; and (4) Southeast, composed of Districts 101, 102, 105, 106, 107, and 108 (Figure 1). During the winter troll fishery we included District 114 in the Northeast Quadrant because most of the fishing effort is concentrated well inside Icy Strait and this district is more accurately described as an inside fishing district. Catch data by district were also computed, although the practical use and accuracy of this information is limited for reasons detailed above. Hand and power troll catches were combined for analysis of age and length data. Whenever sample sizes permitted, the summer troll data were stratified over time into sample periods. Because the age composition of chinook populations could change throughout the migratory season, the grouping of samples into sample periods was a compromise between obtaining the number of samples necessary to derive a reasonably precise period age composition and reducing the bias inherent in grouping sample periods. This strategy produces a more accurate estimate of total season age composition. The winter troll data were summarized by quadrant area into two periods, 1 October to 31 December and 1 January to 16 April. Standard errors of the proportions in each strata were calculated by standard binomial formulas:

$$SE_{ij} = \sqrt{\frac{P_{ij}(1 - P_{ij})}{n_j - 1}},$$

where

- i = age class,
- j = time period,
- P_{ij} = proportion of fish caught of age i in stratum j , and
- n_j = sample size for stratum j .

The age distribution and associated standard errors for the total commercial catch by district and gear type (or escapement by system) were calculated by weighting the estimated sample distribution and its standard error for each sample period by the total catch (or escapement) during the same sample period as follows:

$$SE_{(TotalAge_i)} = \sqrt{\frac{\sum_1^j ((SE_{ij})^2 * C_j^2)}{\sum_1^j C_j^2}},$$

where

C_j = catch of fish in stratum j .

Mean length and its standard error were calculated for each area, period, and age class.

Stratification of the Seine, Gillnet, Trap, Sport, and Subsistence Harvests

Sampling of chinook salmon harvested by seine and gillnet gear was intended to accurately describe the age composition of the season's catch by gear type and district. Samples were generally obtained weekly from each open district. The seine and gillnet fleets harvested chinook salmon incidentally to other salmon species; hence, net gear landings and season total catches were low relative to troll landings. This, plus the tendency for vessel owners to market their chinook catch separately, generated logistical problems in accessing fish for sampling. For this reason, we usually obtained fewer samples than desired. Age and length data for the seine and gillnet fisheries were summarized by district.

The age and length data of sport-caught chinook salmon collected by Sport Fish Division creel samplers were analyzed by sampling location and, when appropriate, into derby or non-derby strata.

Escapement Sampling Distribution

The high cost associated with access to spawning grounds and the low abundance of fish to sample precluded precise estimation of the age, sex, and size composition of most of the Southeast Alaska chinook spawning populations. Most samples were obtained opportunistically in conjunction with other studies. Often, sampling methods or gear used to obtain samples yielded biased estimates of the age, sex, or length composition. A tendency to undersample jacks is suspected for all but the Nakina River collection.

The total natural-run escapement to 11 index river systems was estimated by expanding weir counts or peak survey counts by an estimate of the proportion of fish counted in that tributary and for tributaries not surveyed (Mecum 1990). The regional escapement total was estimated by expanding the total escapement estimate for index rivers within each of three categories (major, medium, or minor producers) by the number of rivers in that category. While accuracy of these estimates is unknown, they allow cautious comparison of the interannual variability of abundance and distribution of the escapement.

RESULTS

Fishery Overview

The 1988 Southeast Alaska chinook salmon fishery was managed in accord with the U.S./Canada Pacific Salmon Treaty, which specified a base-level chinook catch ceiling of 263,000 for the commercial and recreational fisheries combined. An additional catch (*add-on*) of 23,900 was allowed for new Alaska hatchery production yielding a total all-gear target ceiling of 286,900 (ADF&G 1989b). The 1988 Alaska hatchery add-on represented an increase of 7,300 chinook salmon, or 44% more than the 1987 add-on of 16,600. The total commercial and sport chinook salmon harvest in Southeast Alaska in 1988 (excluding Canadian and subsistence harvests) was 273,146, which was 13,754 fish below or 95% of the target ceiling (Table 1).

The troll fishery catch was limited to 226,909 chinook salmon, of which 56,129 occurred during the winter fishery and 170,780 during the summer fishery (Table 1). To limit the catch, the 1988 summer chinook troll fishery was restricted to 12 fishing days, 11 d less than in 1987 and considerably less than the 169-d season fished prior to 1980 (Figure 2). The 12-d summer season was the shortest on record. Chinook non-retention regulations were in effect for an additional 47 d of the summer troll season. A minimum size limit of 28 in (total length) has been in effect since 1987. Although chinook salmon are harvested incidentally in net fisheries, management actions were taken to reduce chinook interceptions and release mortalities and restrict catches to within Alaska Board of Fisheries-established quotas of 11,400 for seine and 7,600 for gillnet. Night closures were enacted to reduce gillnet catches in some areas and weeks, and non-retention regulations and a 28-in total length minimum size limit were imposed for seine-caught fish (ADF&G 1989b).

The harvest of chinook salmon by troll gear was permitted from 1 October 1987 to 14 April 1988 for the winter fishery. The beginning and ending dates of the winter season have been the same since 1981. Fishing was permitted only in those areas east of the surfline; outer coastal areas, including the Exclusive Economic Zone (EEZ) west of the surfline, were closed during the winter fishery. Since 1981 the entire troll fishery has been closed from 15 April to 14 May. Additional spring closures were implemented to provide extra protection for certain local stocks. There were special hatchery terminal area openings near Little Port Walter, Crystal Lake, Carroll Inlet, Whitman Lake, Medvejie, and Neets Bay Hatcheries from 6 to 29 June. Length of weekly fishing periods varied by area. Catches in the special openings in June were included in the summer troll harvest totals.

The summer fishery was delayed until 1 July (11 d later than the 20 June opening in 1986 and 1987) to reduce the number of days of chinook non-retention. The general summer troll season extended through 21 September for the harvest of all species except chinook, which could only be retained from 1 July to 12 July (ADF&G 1989b). Chinook salmon catch rates during the 1988 summer season averaged 13,500 chinook salmon per fleet day, an increase of 50% over the 1987 rate of 9,000. After the quota for troll-caught chinook salmon had been reached, fishermen were allowed to continue fishing for other species of salmon, but chinook that were hooked were required to be returned to the water until the end of the

summer season. Several outer coastal areas of high chinook salmon abundance were closed to all fishing after 12 July to reduce chinook salmon hook-and-release mortality. The non-retention period was limited to 47 d compared to 60 d in 1987. The reduction was due both to the delayed summer season opening date and to fall closures for coho *O. kisutch* conservation. The summer chinook salmon season was also shortened several days by the increased winter troll catch.

The purse seine and gillnet fisheries were managed by emergency order with specific area/time openings. In the purse seine fishery, a preseason management approach to effect the chinook salmon catch limit required non-retention of large chinook salmon (≥ 28 in or 71.1 cm total length) early in the seining season and again later in the season when the catch limit was obtained. The early season non-retention period ensured release of chinook salmon at a time when the catch rate of other salmon was relatively low, thus making it more effective. Conversely, retention was allowed when the catch rate of other species was high, making it difficult to effectively sort and release large chinook salmon because of the large volume of fish. Retention of large chinook salmon was allowed the 4 d that seining was allowed between 7 and 18 August and for 2 d between 24 and 25 August. Non-retention was in place for 10 d of the 16 d open during the general summer seining season that extended from 3 July through 1 September and during the entire fall seining season that extended from 2 September through 24 October. Retention of large chinook salmon was allowed during terminal area seining at Neets Bay (District 101-90) and Hidden Falls (112-22) Hatcheries. Chinook salmon ≤ 21 in (53.3 cm) could be retained and sold throughout the season, whereas chinook between 21 and 28 in could be retained but not sold at any time in the season. The chinook salmon < 21 in were reported as small chinook salmon on the fish ticket and did not count against the chinook catch quota.

In Southeast Alaska salmon fisheries, chinook salmon are usually the least abundant species. Although chinook salmon fetch the highest price per pound of any species of salmon, their low abundance ranks them last in overall value to fishermen. In 1988 most were sold in the dressed/frozen market at a weighted processor average price of \$2.23/lb for set gillnet-caught fish, \$1.87/lb for drift gillnet-caught fish, \$3.01/lb for seine-caught fish, and \$3.91/lb for dressed troll-caught fish (Appendix C.3).

Harvest Statistics

Numbers and Landed Weight

The 1988 reported catch in numbers, pounds, and average weights of chinook salmon are presented for the commercial fisheries by gear type, district, and week. Number of boats and average catch per boat for each gear type is also included. Actual catch was higher than reported because some were kept for personal use and some net-caught deliveries, typically < 28 in, were reported as pink salmon *O. gorbuscha*. These factors were considered to be insignificant relative to reported catches. The incidental catch and mortality of chinook salmon caught during chinook non-retention fisheries in 1988 was estimated by Seibel et al. (1989) for troll fisheries and by Rowse (1990a) for seine fisheries.

A total of 276,457 chinook salmon were harvested in Southeast Alaska, Yakutat, and Canadian transboundary fisheries during the 1987–1988 winter troll fishery and the 1988 summer commercial, sport, and subsistence fisheries (Table 1). Commercial fisheries in Alaska accounted for most (89.8%) of the harvest followed by the sport fishery (9.0%) and the Canadian transboundary river fisheries (1.2%). Small catches were reported by Alaskan subsistence fisheries (94 fish). Troll gear harvested 91.4% of the 248,359 fish harvested by U.S. commercial fishermen. Alaska hatcheries contributed an estimated 28,498 chinook salmon to commercial and recreational fisheries in 1988. The hatchery catch was primarily 4- and 5-year-old fish from the 1982 and 1983 broods (ADF&G 1989a). Total pounds, average weight, number of boats, and catch per boat data are presented in Appendices A.2 to A.23 for the troll, seine, and gillnet catches.

Troll. The winter troll fishery (1 October 1987 to 14 April 1988) harvested 56,129 chinook salmon (Table 2). This was 30,273 more fish than in 1987 and the highest winter harvest on record. The increased catch was due to increased effort, increased chinook salmon abundance, and mild weather conditions. A high proportion of the catch occurred during the months of October 1987 and March and April 1988 in the Northeast and Southeast Quadrants. The power troll fleet accounted for 85.8% of the harvest. Approximately 13% of the chinook salmon harvested during the winter troll fishery were of Alaska hatchery origin. This is more than double the 5% rate of Alaska hatchery chinook salmon in the 1987 summer season (Pahlke and Mecum 1989).

The summer troll fishery harvested 170,780 chinook salmon (Table 2). This was 22,282 less fish than in 1987. The majority were harvested in the Northwest Quadrant area by the power troll fleet (Table 3). The hand troll fleet also reported most of its catch from this area (Table 4). Fish caught in the outside areas had a larger average weight than those in the inside areas (Appendix A.5 to A.7). Average weights increased slightly through the reporting year. Only 5% of the chinook salmon harvested during the summer troll fishery originated from Alaska hatcheries (Pahlke and Mecum 1989).

In 1988 experimental troll fisheries were conducted in Southeast Alaska to determine the feasibility of increasing the harvest of chinook salmon returning to local hatcheries. These fisheries were conducted at areas adjacent to Crystal Lake (ADF&G), Little Port Walter (National Marine Fisheries Service), Medvejie (Northern Southeast Regional Aquaculture Association), and Neets Bay and Whitman Lake (Southern Southeast Regional Aquaculture Association) Hatcheries. A small number of chinook salmon were also harvested in an experimental troll fishery conducted in the Cross Sound area designed to determine the feasibility of harvesting pink and chum *O. keta* salmon during the early part of the season with troll gear. Fishing effort increased substantially over 1987. Effort was highest in Frederick Sound where 201 different boats fished in some or all of the opened periods. In the Little Port Walter fishery, 132 boats participated, and 116 boats participated in the Ketchikan area troll fisheries. A total of 7,563 chinook salmon were harvested in the combined June experimental fisheries with an overall Alaska hatchery contribution rate of 25.2% (Table 5). Under the Pacific Salmon Treaty, chinook salmon produced in hatcheries may be harvested in addition to base-level chinook catch ceilings for Southeast Alaska fisheries. Other chinook salmon harvested during the experimental troll fisheries were included in the base-level catch ceilings. Non-hatchery catch limits were imposed for all areas. The fishery in each

area was limited to 1,000 non-hatchery chinook salmon unless more than 33% of the harvest consisted of Alaska hatchery fish, in which case the limit would be increased to 2,000. The openings in these mixed stock experimental fisheries were open only during specified weekly periods to evaluate the presence of hatchery-produced fish in relation to natural stocks (Pahlke and Mecum 1989).

Terminal Common Property. Terminal and cost recovery harvests are presented in Table 6. The fisheries in the immediate vicinity of the Crystal Lake Hatchery and Carroll Inlet were open for continuous trolling from 6 to 29 June. Both these fisheries were considered terminal fisheries harvesting hatchery-produced chinook salmon not needed for brood stock. Terminal area troll fisheries harvested 1,171 chinook salmon in June 1988, producing an overall Alaska hatchery contribution rate of 70.0%. The highest terminal troll (726) and gillnet (1,857) harvests occurred at Crystal Lake Hatchery. Cost recovery harvests totaling 10,049 included 7,821 chinook salmon from the Neets Bay and 1,372 fish from the Crystal Lake Hatcheries.

Seine. The majority of the purse seine harvest of 11,077 chinook salmon occurred in District 104 (the Noyes Island fishery; Table 7). The 1988 harvest was 20,298 less than the 1982 record-high catch of 31,375 but near the 1960–1987 average catch of 10,943. The catches of chinook salmon by the seine fleet are strongly related to the seine effort needed to harvest pink salmon (Van Alen and Seibel 1987). Purse seine harvests of small chinook (≤ 28 in) totaled 1,032 fish (Table 8). This underestimates the total landings of small chinook salmon because some were sold as pink salmon. The estimate of the incidental mortality of chinook salmon during the non-retention period was 12,038, assuming a delayed mortality rate of chinook salmon released alive was 70% (Rowse 1990a). Average weights of fish were highest in District 104 (Appendix A.16).

Drift Gillnet. The drift gillnet catch of 9,386 chinook salmon (Table 9) was taken primarily in the first half of the season. Catches were below the long-term average (1960–1987) in Districts 106, 108, 111, and 115 and above the average in District 101 (ADF&G 1989b). Directed chinook salmon gillnet fisheries were eliminated after 1975, except for limited set gillnet fisheries in Yakutat. Average weights varied considerably between weeks and districts (Appendix A.21). The average weights were highest in Districts 106 and 108 and lowest in District 115. A seasonal decline in average weights was observed in Districts 101, 106, 108, and 111.

Set Gillnet. The set gillnet catch was 893 chinook salmon (Rowse 1990b). Chinook salmon were harvested in all Yakutat area fisheries except Italio, Dangerous, Yanna, Kaliakh, Tsiu, Yahtse, Tashalich, and Kiklukh Rivers. The largest catch (299 fish) was in the Situk River fishery.

Trap. The four fish traps operating in the Annette Island Fishery Reserve caught 94 chinook salmon.

Subsistence. Ninety-four chinook salmon were reported in Alaskan subsistence catches from the Chilkat River adjacent to the Klukwan Reserve. All subsistence permits were not returned; therefore, subsistence catch totals listed in this report possibly underestimate the total subsistence harvest. Canadian Indian food fishery harvests totaled 197 small and 1,178 large fish on the upper Stikine River and 43 fish from the Alsek-Tatshenshini Rivers (Table 10; TTC 1989).

Canadian Inriver Gillnet. The Canadian commercial harvest in the Taku River was 555 large and 186 small chinook salmon (Table 10). This was above the 1979–1987 average of 282. In the Stikine River, 1,007 large and 201 small chinook salmon were caught in the lower river and 185 large and 46 small were caught in the upper river.

Sport. The Alaskan sport catch was an estimated 24,787 large fish and 1,373 small fish (Table 11; Mills 1989). The largest catches occurred near Juneau and Ketchikan. Canadian sport fishermen caught approximately 249 fish in the Alsek River and an unknown, but presumably small, number in the Taku and Stikine Rivers (Table 10; TTC 1989).

Historical Data. Historical summaries of catch and value statistics are presented in Appendices C.1 to C.3. The mean timing date of the 1987–1988 winter and 1988 summer troll harvests was 2 weeks later than the long-term average (1960–1987; Appendix C.1). Catches were below the 1960–1987 average for drift gillnet, set gillnet, and troll fisheries and above average for the purse seine fishery (Appendix C.2).

Value data for the years 1977–1988 are presented in Appendix C.3. The price per pound for chinook salmon was above the 1977–1987 average for all gear types. The total catch in pounds was below the long-term average for seine, setnet, and troll gears and above the average for drift gillnet. Total value of the harvests was below the average for set gillnet and above the average for other gear types.

Age, Sex, and Length Data

Age and length statistics are presented by area and period for the troll fishery (Tables 12–19), by district for the seine (Tables 20 and 21) and drift gillnet (Tables 22 and 23) fisheries, and each Alaskan sport fishery (Tables 24 and 25) sampled. Age, sex, and length composition data for Yakutat area set gillnet catches are reported in Rowse (1990b).

Age and length composition, by sex, of chinook salmon sampled from an experimental troll fishery conducted in four areas of Southeast Alaska from 6 to 28 June 1988 are presented in Tables 15 and 19. A description of this fishery can be found in Pahlke and Mecum (1989).

Troll. Winter troll catches in the Northwest Quadrant were dominated by 1983- and 1984-brood age-0. chinook salmon (age-0.2 and -0.3 fish in 1987 and age-0.3 and -0.4 fish in 1988; Table 12). In the Southwest Quadrant, 1983 and 1984 brood years were most common (age-0.2 and -1.2 fish in 1987 and age-0.3 and -1.3 fish in 1988). The Northeast Quadrant age composition was dominated by the 1982 and 1983 brood years with age-1.2 and -1.3 fish being most common in 1987 (age 1.3 and 1.4 in 1988). Fish aged 0.2 in 1987 (0.3 in 1988) were also common in this area. Fish aged 0.2 and 1.2 in 1987 (0.3 and 1.3 in 1988) were abundant in the Southeast Quadrant. These fish represent the 1983 and 1984 brood years. Age-1. fish represented 65% of the catch in the eastern quadrants and only 31% in the western quadrants.

Summer troll catches were dominated by age-0.3 and -0.4 fish in the Northwest Quadrant, by age-0.3 fish in the Southwest Quadrant, by age-0.3 and -1.3 fish in the Northeast Quadrant, and by age-0.3, -1.2, and -1.3 fish in the Southeast Quadrant (Table 13; Figure 3). Age 1. composed 56% of the catch in the eastern quadrants while only 19% in the western quadrants. Significant differences in the age composition among periods were noted in the Northwest and Northeast Quadrants indicating a migration of different age classes through the fishery as time progressed (Table 14).

Age-1.3 chinook salmon were most common in catches sampled in the spring experimental troll fishery from lower Clarence Strait, lower Chatham Strait, and Frederick Sound (Table 15). Chinook salmon aged 1.4 were common in the Wrangell Narrows fishery (76.1%) and age-0.3 fish were common in the Silver Bay and Cross Sound fisheries (61.4% and 73.3%, respectively). Fish aged 0.3 were also common in the lower Chatham Strait and Frederick Sound fisheries.

Examination of average length-by-age for the winter and summer troll fisheries revealed that fish harvested in the western quadrants were significantly larger than fish harvested in the eastern quadrants for most age classes; however, summer troll chinook salmon harvested in the Northeast Quadrant were larger than those harvested in the Southwest Quadrant (Tables 16 and 17). Inseason growth was evident over the two periods of the winter troll season. Significant changes in the length composition of individual age classes through time in the summer troll fishery are noted for all quadrants that were stratified (Table 18).

Length composition of the spring test troll fishery is presented in Table 19. The largest fish overall were recorded in the Wrangell Narrows terminal troll fishery.

Seine. Small sample sizes of the seine harvest precluded making statistical comparisons of age and length compositions by area (Tables 20 and 21). Age-0. fish composed more than 90% of the samples in District 104.

Drift Gillnet. Sample sizes were also small for chinook salmon harvested by gillnet. Age-1. fish dominated drift gillnet harvests in all districts sampled: 91% in District 101, 100% in District 111, and 82% in District 115. Fish aged 1.2 and 1.3 were the principal age classes (Table 22). The mean length

of fish sampled from District 115 tended to be smaller than fish of the same age caught in other districts (Table 23).

Sport. Age-1. fish dominated all sampled sport fisheries except Sitka's (Table 24). Age-1.3 fish dominated all areas, except Petersburg, Wrangell, and Haines where age-1.4 fish were most common. In Sitka, age-0.3 and -0.4 fish dominated. The Juneau Derby consisted mostly of fish aged 0.3; fish aged 1.3 were also common. Mean lengths varied considerably between sampling locations (Table 25).

Escapement Statistics

Numbers of Fish

Surveys by aerial (fixed wing and helicopter), foot, boat, and weir provided indices of peak escapement for 70 spawning areas (Table 26). Weirs were used to count the escapements to 7 natural runs — Little Tahltan Lake, King Salmon River, Little Tatsamenie Lake, Hackett River, Klukshu River, Situk River, and Mountain Lake (Appendices B.1–B.6) — and 5 hatcheries: Deer Mountain (Ketchikan Creek), Crystal Lake (Crystal Creek), Little Port Walter (Sashin Creek), Snettisham, and Auke Creek. The survey data for unweired systems must be used with caution because the proportion of the total run observed within each river varies and is not known; nor is the contribution of jacks, which are not counted.

The estimated total chinook salmon escapement to all Southeast Alaska and transboundary wild stock systems was 60,743 fish (Table 27), a 16% increase from the 1987 estimated total escapement of 52,225 fish (Olsen 1992). This was the sixth consecutive year of an increase in total estimated escapement. Compared to the 1975–1980 base-period average of 26,000 chinook salmon, the 1988 escapement represented an increase of 133% or 34,500 fish. Escapements to the Taku, Stikine, and King Salmon Rivers increased, while there was a decrease in escapement levels to the remainder of the indicator systems. The escapement of 29,168 chinook salmon to the Stikine River was a new record. This was 53% higher than in 1987 and 150% high than in 1986. The Taku River estimated escapement of 13,411 was 50% higher than the 1987 estimated escapement of 8,951. The current escapement goal for all Southeast Alaska and transboundary systems is 64,000 chinook salmon. In 1988 approximately 95% of this goal was attained. Escapement goals were achieved in 3 of the 11 indicator systems in 1988. Escapement levels improved over 1987 levels in 3 of the 11 systems (ADF&G 1989a). Estimated total escapements to the 11 indicator systems are presented for the years 1975–1988 in Appendix C.4. Escapements to the indicator systems were above the 1975–1987 average for all systems except the Alsek, Situk, and Blossom Rivers.

Age, Sex, and Length

Age-1. fish dominated the escapements of natural runs (Table 28). Males were predominately age 1.1, 1.2, and 1.3, and females were predominately age 1.3 and 1.4. Males outnumbered females 9,440 to 3,848

in escapement samples. The reader is cautioned, however, that sampling may not have been random with respect to size (and sex) of fish, except for Nakina River returns where jacks were sampled in proportion to their return. In the Nakina River males composed 74% of the run, of which 15% were age 1.1 and 56% were age 1.2. Females were 90% age 1.4 and 8% age 1.3.

Age-1. fish also dominated the hatchery returns (Table 28). Males and females were predominately aged 1.3 and 1.4. Mean length of hatchery returns varied considerably between ages, sexes, and samples (Table 29).

A total of 17,300,000 chinook salmon eggs were taken by hatcheries in 1988: 17,200,000 from hatchery returns and 100,000 from wild stocks (ADF&G 1989a). The hatchery egg take was approximately the same as in 1987, the wild stock egg take 33% less. Releases of hatchery-produced chinook salmon smolts were reduced in 1988 compared to 1987, primarily because production of age-0 smolts was curtailed. The number of age-0 smolts released from Alaska hatcheries increased from 81,900 in 1982 to 5,557,800 in 1986 and decreased to 1,682,000 in 1988. A shift in emphasis away from production of age-0 smolts was implemented in 1987. Hatchery operators have decreased production of age-0 smolts because of initial indications of poor performance from previous releases. Releases of age-1. chinook salmon smolts totaled 4,118,000 in 1988. Existing capacity for rearing yearling smolts should be reached at most facilities with production from eggs taken in 1988. Smolt capacity increased over 1987 largely because of expansions of the chinook programs at the Snettisham and Tamgas Creek Hatcheries.

Stock Composition

A minimum estimate of the harvest of non-Alaskan chinook salmon can be made based on age-composition analysis and CWT analysis. Results of this and previous studies (Kissner 1973, 1980; McBride and Wilcock 1983; Van Alen and Marshall 1983; Van Alen and Olsen 1986; and Van Alen et al. 1986) have shown that virtually all wild-run chinook salmon originating in Southeast Alaska smolt during their second year (age 1.). While we recognize that Alaska's wild stocks (notably Situk River) and hatcheries contributed some age-0. fish to the 1988 harvest, the low incidence of this age class in the escapement samples, coupled with relatively low overall abundance of spawners, lead us to conclude that ignoring the contribution of these fish would not result in significant bias. Therefore, virtually all of the 160,824 age-0. fish harvested in Alaskan commercial troll, seine, and drift gillnet fisheries (Table 30) were of non-Alaskan origin. Non-Alaskan fish, therefore, composed a minimum of 64.8% of the chinook salmon harvested in domestic commercial fisheries of 1988, 6.9% more than in 1987 and 7.2% more than in 1986. In addition, age-composition data (Rogers et al. 1983) indicate that most of the age-1.4 and -1.5 fish harvested originated from Alaska and British Columbia runs north of the Fraser River. Scale-pattern analysis of Alaskan versus non-Alaskan age-1. fish in 1982 catches (Van Alen 1985) revealed that non-Alaskan fish accounted for approximately half of the age-1. fish.

LITERATURE CITED

- ADF&G (Alaska Department of Fish and Game). 1988. Southeast and Yakutat commercial finfish regulations. Division of Commercial Fisheries, Juneau.
- ADF&G (Alaska Department of Fish and Game). 1989a. 1989 Annex: chinook salmon plan for Southeast Alaska. Fisheries Rehabilitation, Enhancement and Development Division, Juneau.
- ADF&G (Alaska Department of Fish and Game). 1989b. Report to the Board of Fisheries — Southeast Alaska and Yakutat (Region I) 1988 Finfish Fisheries. Division of Commercial Fisheries, Juneau.
- Angers, C. 1989. Note on quick simultaneous confidence intervals for multinomial proportions. The American Statistician 43:91.
- Clark J. E., B. W. Van Alen, and R. P. Marshall. 1985. Estimated contribution of coded wire tagged releases of chinook salmon (*Oncorhynchus tshawytscha*) to the commercial fisheries of Southeastern Alaska in 1982. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 161, Juneau.
- Clutter, R., and L. Whitesel. 1956. Collection and interpretation of sockeye salmon scales. Bulletin of the International Pacific Salmon Fisheries Commission 9, New Westminster, British Columbia.
- Cochran, W. G. 1977. Sampling techniques, 3rd edition. John Wiley and Sons, New York.
- INPFC (International North Pacific Fisheries Commission). 1963. Annual Report — 1961, Vancouver, British Columbia.
- Kissner, P. D. 1973. A study of chinook salmon in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1972–1973, AFS-41, Juneau.
- Kissner, P. D. 1980. A study of chinook salmon in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1979–1980, AFS-41, Juneau.
- Kissner, P. D., and D. Hubartt. 1986. A study of chinook salmon in Southeast Alaska. Alaska Department of Fish and Game, Sport Fish Division, Annual Report 1985–1986, AFS-41-13, Juneau.
- McBride, D. N., and J. A. Wilcock. 1983. Alaska chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catch and escapement, 1961–1980, with age, size, and sex composition estimates. Alaska Department of Fish and Game, Division of Commercial Fisheries, Informational Leaflet 212, Juneau.

LITERATURE CITED (Continued)

- McGregor, A. J., and J. E. Clark. 1989. Migratory timing and escapement of Taku River salmon stocks in 1988. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 1J89-40, Juneau.
- McGregor, A. J., and B. W. Van Alen. 1987. Abundance, age, and sex compositions of chinook, sockeye, coho, and chum salmon catches and escapements in Southeast Alaska in 1981. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 200, Juneau.
- Mecum, R. D. 1990. Escapement of chinook salmon in Southeast Alaska and transboundary rivers in 1989. Alaska Department of Fish and Game, Division of Commercial Fisheries, Fishery Data Series 90-52, Juneau.
- Mills, M. J. 1989. Alaska statewide sport fisheries harvest report 1988. Alaska Department of Fish and Game, Sport Fish Division, Fishery Data Series 122, Juneau.
- Mundy, P. R. 1984. Migratory timing of salmon in Alaska with an annotated bibliography on migratory behavior of relevance to fisheries research. Alaska Department of Fish and Game, Division of Commercial Fisheries, Informational Leaflet 234, Juneau.
- Olsen, M. A. 1992. Abundance, age, sex, and size of chinook salmon catches and escapements in Southeast Alaska in 1987. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fisheries Report 92-07, Juneau.
- Pahlke, K., and D. Mecum. 1989. Fishing effort, harvest, and hatchery contributions of chinook salmon in experimental troll fisheries during June 1988. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 1J89-17, Juneau.
- Parker, R. R., and W. Kirkness. 1956. King salmon and the ocean troll fishery of Southeastern Alaska. Alaska Department of Fisheries, Research Report 1, Juneau.
- Rogers, D. E., and 6 coauthors. 1983. Origins of chinook salmon in the area of the Japanese mothership salmon fishery. Annual Report July 1982-June 1983, Contract 83-0022 of University of Washington Fisheries Research Institute FRI-UW-8311 to Alaska Department of Fish and Game, Juneau.
- Rowse, M. L. 1990a. Chinook salmon catch and mortality associated with the 1988 Southeast Alaska purse seine fishery. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 90-03, Juneau.

LITERATURE CITED (Continued)

- Rowse, M. L. 1990b. Compilation of catch, escapement, age, sex, and size data for salmon returns to the Yakutat area in 1988. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 90-13, Juneau.
- Seibel, M., A. Davis, J. Kelly, and J. E. Clark. 1989. Observations on chinook salmon hook and release in the 1988 Southeast Alaska troll fishery. Alaska Department of Fish and Game, Division of Commercial Fisheries, Regional Information Report 1J89-41, Juneau.
- Thompson, S. K. 1987. Sample size for estimating multinomial proportions. *The American Statistician* 41(1):42-45.
- TTC (Transboundary Technical Committee). 1989. Preliminary salmon catches, escapements, and enhancement activities in the transboundary rivers in 1989. Unpublished report prepared for members of the Pacific Salmon Commission, Vancouver, British Columbia.
- Van Alen, B. W. 1985. Origins of chinook salmon (*Oncorhynchus tshawytscha*) in the 1982 Southeastern Alaska troll, seine, and gillnet fisheries. Alaska Department of Fish and Game, Division of Commercial Fisheries. (unpublished Region I report), Juneau.
- Van Alen, B. W., and S. L. Marshall. 1983. Feasibility of determining the origin of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) in Southeastern Alaska fisheries based on scale pattern analysis, 1981. Alaska Department of Fish and Game, Division of Commercial Fisheries, (unpublished Region I report), Juneau.
- Van Alen, B. W., and M. A. Olsen. 1986. Abundance, age, sex, and size of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catches and escapement in Southeastern Alaska, 1984. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 190, Juneau.
- Van Alen, B. W., K. A. Pahlke, and M. A. Olsen. 1987. Abundance, age, sex, and size of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catches and escapements in Southeastern Alaska in 1985. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 215, Juneau.
- Van Alen, B. W., K. A. Pahlke, and M. A. Olsen. 1990. Abundance, age, sex, and size of chinook salmon catches and escapements in Southeastern Alaska in 1986. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Fishery Report 90-12, Juneau.

LITERATURE CITED (Continued)

- Van Alen, B. W., and M. Seibel. 1987. Observations on chinook salmon non-retention in the 1986 Southeast Alaska purse seine fishery — Final Report. Alaska Department of Fish and Game, Division of Commercial Fisheries, and National Marine Fisheries Service, Contract NA-87-ABH-00025, Juneau.
- Van Alen, B. W., and D. S. Wood. 1983. Abundance, age, size, and sex composition of chinook salmon (*Oncorhynchus tshawytscha*) catches and escapements in Southeastern Alaska, 1982. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 102, Juneau.
- Van Alen, B. W., D. S. Wood, and S. L. Marshall. 1986. Abundance, age, sex, and size of chinook salmon (*Oncorhynchus tshawytscha* Walbaum) catches and escapements in Southeastern Alaska, 1983. Alaska Department of Fish and Game, Division of Commercial Fisheries, Technical Data Report 177, Juneau.

Table 1. Harvest of chinook salmon in Southeast Alaska, 1988.

Fishery			Number ^a	Percent
Ocean Commercial				
Troll	Hand	Power		
Winter	7,977	48,152	56,129	20.30
Summer	24,668	146,112	170,780	61.77
Seine			11,077	4.01
Gillnet			9,386	3.40
Set Gill Net (Yakutat Area)			893	0.32
Trap			94	0.03
Subtotal			248,359	89.84
Sport			24,787	8.97
Alaskan Subsistence			94	0.03
Canadian Transboundary				
Taku Commercial			555	0.20
Stikine Commercial (upper and lower river)			1,192	0.43
Stikine Subsistence (upper river)			1,178	0.43
Alsek Subsistence			43	0.02
Alsek Sport			249	0.09
Subtotal			3,217	1.16
Total			276,457	100.00

^a Excludes small chinook, "jacks."

Table 2. Hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03		24		27	99	56	206	8	147		60	122		337
	41	10/04-10/10	242	268	5	380	314	128	1,337	1,545	3,489	408	562	1,070		7,074
	42	10/11-10/17	225	211	27	441	117	248	1,269	585	2,146	251	321	760		4,063
	43	10/18-10/24	167	10		400	84	147	808	1,274	2,298	17	157	756		4,502
	44	10/25-10/31	40	100	6	74	18	94	332	1,103	982	100		650		2,835
	45	11/01-11/07	44	36		191	7	211	489	157	73	45	1	389		665
	46	11/08-11/14	28	17		66	47	101	259	232	126		5	671		1,034
	47	11/15-11/21	22	41		16	2	62	143	181	17			568		766
	48	11/22-11/28	24	3			19	55	101	7		17		141		165
	49	11/29-12/05	19		1	16	28	98	162	17				25		42
	50	12/06-12/12	1			16	27	16	60	17		9		28		54
	51	12/13-12/19	24	2		4		2	32	23	3			48		74
	52	12/20-12/26	13	1				1	15		3			5		8
	53	12/27-12/31				29		18	47	3						3
1988	1	01/01-01/02		2		14		15	31							0
	2	01/03-01/09	1	28		19	17	28	93	11				33		44
	3	01/10-01/16	2	39		15		20	76	87				4	1	92
	4	01/17-01/23	8			28	6	18	60	31	2		1	47		81
	5	01/24-01/30	4	22	32	7	8	9	82	6	4			24		34
	6	01/31-02/06	2	21		16			39	19				18		37
	7	02/07-02/13	11	32	1	39	33	16	132	108	2			31		141
	8	02/14-02/20	18	3		13	6	10	50	22	2	10		5		39
	9	02/21-02/27	30	25		26	1	3	85	21	8			46		75
	10	02/28-03/05	37	30	32	48	22	14	183	38	32		2	60		132
	11	03/06-03/12	10		106	26	21	13	176	96	119	18	4	60		297
	12	03/13-03/19	14	122	66	114	12	16	344	343	162	1		94		600
	13	03/20-03/26	33	37	179	168	23	1	441	134	122		5	263		524
	14	03/27-04/02	68	116	83	213	1	6	487	736	587			356		1,679
	15	04/03-04/09	82	99	23	22	68	24	318	240	245			139		624
	16	04/10-04/16	77	193	183	136	80	150	819	477	665		6	260		1,408
Winter Totals			1,246	1,482	744	2,564	1,060	1,580	8,676	7,521	11,234	876	1,124	6,673	1	27,429
									28							0
			23	05/29-06/04	28				841	708	1,346					2,054
			24	06/05-06/11	488	259	94		982	218	367					585
			25	06/12-06/18	411	427	144		514	633	217					850
			26	06/19-06/25	226	71	217		1,168	2,206	645	29	532			3,412
			27	06/26-07/02	248	116	238	544	22	7	6,080	7,584	2,047	24	1,871	11,526
			28	07/03-07/09	569	2,025	931	2,318	230	4	3,419	4,106	1,873	6	1,001	6,986
			29	07/10-07/16	333	731	1,131	1,214	6							
Summer Totals			2,303	3,629	2,300	4,531	258	11	13,032	15,455	6,495	59	3,404	0	0	25,413
Season Totals			3,549	5,111	3,044	7,095	1,318	1,591	21,708	22,976	17,729	935	4,528	^a	1	52,842

- Continued -

Table 2. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03				0	1,038										1,038	1,581
	41	10/04-10/10	34	7		41	3,460										3,464	11,916
	42	10/11-10/17	75	48		123	2,546							4			2,547	8,002
	43	10/18-10/24	24			24	1,384							1			1,384	6,718
	44	10/25-10/31	26	9		35	1,364										1,366	4,568
	45	11/01-11/07	47			47	1,364							2			1,364	2,565
	46	11/08-11/14	13			13	328										328	1,634
	47	11/15-11/21	74	9		83	360										360	1,352
	48	11/22-11/28	10			10	280								2		282	558
	49	11/29-12/05	53			53	274										274	531
	50	12/06-12/12	11			11	181										181	306
	51	12/13-12/19	96			96	221										221	423
	52	12/20-12/26	4			4	41										41	68
	53	12/27-12/31	49			49	131										131	230
1988	1	01/01-01/02				0	197										197	228
	2	01/03-01/09	104			104	930										930	1,171
	3	01/10-01/16	54	16		70	379										379	617
	4	01/17-01/23	38			38	99										99	278
	5	01/24-01/30	46	37		83	426										426	625
	6	01/31-02/06	9			9	367										367	452
	7	02/07-02/13	62			62	173								2		175	510
	8	02/14-02/20	9	8		17	61								8		69	175
	9	02/21-02/27	86	5		91	114								5		119	370
	10	02/28-03/05	154			154	213								1		214	683
	11	03/06-03/12	25	10		35	319										319	827
	12	03/13-03/19	118			118	502										502	1,564
	13	03/20-03/26	10			10	312										312	1,287
	14	03/27-04/02	42			42	204			33					9		246	2,454
	15	04/03-04/09	179			179	382			13					4		399	1,520
	16	04/10-04/16	58	20		78	599								12		611	2,916
Winter Totals			1,510	169		1,679	18,249			46					50		18,345	56,129
	23	05/29-06/04				0											0	28
	24	06/05-06/11				0	12										12	2,907
	25	06/12-06/18				0			116								116	1,683
	26	06/19-06/25				0	51		56								107	1,471
	27	06/26-07/02	243	5,519		5,762	5,798	719						44	13		6,574	16,916
	28	07/03-07/09	1,469	14,167		15,636	39,189	2,871	2,181	210	432	793	2,414	38	213	445	48,786	82,028
	29	07/10-07/16	791	5,759	171	6,721	25,520	1,746	2,206	125	2,710	2,274	9,152	911	171	3,806	48,621	65,747
Summer Totals			2,503	25,445	171	28,119	70,570	5,508	4,387	335	3,142	3,067	11,566	993	397	4,251	104,216	170,780
Season Totals			4,013	25,614	171	29,798	88,819	12,181	4,433	335	3,142	3,067	11,566	993	447	4,251	122,561	226,909
1987	40	09/27-10/03		24			97	21	142			93		36	129			
	41	10/04-10/10	239	261	5	325	247	106	1,183		1,424	3,325	408	92	933	6,182		
	42	10/11-10/17	207	183	27	333	22	190	962		471	1,908	251	52	635	3,317		
	43	10/18-10/24	156	9		320	33	100	618		1,113	2,176	17	46	646	3,998		
	44	10/25-10/31	40	77		25	16	15	173		996	909	100		430	2,435		
	45	11/01-11/07	37	23		134	1	132	327		139	56	45		296	536		

* District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Table 3. Power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant					
			101	102	105	106	107	108	Total	109	110	111	112	114	Total
1987	46	11/08-11/14	25	17		55	29	65	191	216	115		2	464	797
	47	11/15-11/21	14	32				26	72	165	8			473	646
	48	11/22-11/28	23					47	70			17		117	134
	49	11/29-12/05	19			14	18	33	84	8				6	14
	50	12/06-12/12	1			1	18	3	23			9		9	18
	51	12/13-12/19	24					2	26	23				30	53
	52	12/20-12/26	13						13		3			5	8
	53	12/27-12/31				20		3	23						0
1988	1	01/01-01/02		2		14		12	28						0
	2	01/03-01/09	1	28		10	6	20	65	4				20	24
	3	01/10-01/16	2	39		9		14	64	85					85
	4	01/17-01/23	8			6	6	10	30		2		1	14	17
	5	01/24-01/30	4	22	32		8	6	72					5	5
	6	01/31-02/06	2	21		7			30	13				2	15
	7	02/07-02/13	10	22	1	37	28	15	113	108	2			9	119
	8	02/14-02/20	18	3		3			24	22		10			32
	9	02/21-02/27	29	25		17	1		72	19	8			11	38
	10	02/28-03/05	36	30	32	33	4	8	143	38	23			12	73
	11	03/06-03/12	10		83	1		4	98	87	119	18	4	38	266
	12	03/13-03/19	10	122	58	45	1	4	240	315	152	1		40	508
	13	03/20-03/26	28	37	177	104			346	125	121		5	208	459
	14	03/27-04/02	61	116	52	156			385	668	561			321	1,550
	15	04/03-04/09	78	86	23	17	51	1	256	190	226			102	518
	16	04/10-04/16	75	185	149	68	52	123	652	395	646		6	236	1,283
Winter Totals			1,170	1,364	639	1,754	638	960	6,525	6,624	10,453	876	208	5,098	23,259
			23	05/29-06/04	4				4						0
			24	06/05-06/11	311	210			521	663	1,097				1,760
			25	06/12-06/18	301	355		5	661	180	303				483
			26	06/19-06/25	144	55		33	232	590	198				788
			27	06/26-07/02	138	56	238	117	549	1,723	268	29			2,020
			28	07/03-07/09	376	1,742	779	1,991	5,000	5,738	1,136		710		7,584
			29	07/10-07/16	222	586	1,011	985	2,804	3,096	1,265		313		4,674
Summer Totals			1,496	3,004	2,028	3,131	112	0	9,771	11,990	4,267	29	1,023	0	17,309
Season Totals			2,666	4,368	2,667	4,885	750	960	16,296	18,614	14,720	905	1,231	*	40,568

- Continued -

Table 3. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03				0	782										782	1,053
	41	10/04-10/10	34	7		41	3,242										3,242	10,648
	42	10/11-10/17	75			75	2,379										2,379	6,733
	43	10/18-10/24	24			24	1,262										1,262	5,902
	44	10/25-10/31	26	9		35	1,253										1,253	3,896
	45	11/01-11/07	39			39	1,333										1,333	2,235
	46	11/08-11/14	13			13	311										311	1,312
	47	11/15-11/21	62	9		71	350										350	1,139
	48	11/22-11/28	10			10	249										251	465
	49	11/29-12/05	53			53	240								2		240	391
	50	12/06-12/12	4			4	169										169	214
	51	12/13-12/19	53			53	190										190	322
	52	12/20-12/26	4			4	39										39	64
	53	12/27-12/31	49			49	107										107	179
1988	1	01/01-01/02				0	197										197	225
	2	01/03-01/09	70			70	888										888	1,047
	3	01/10-01/16	53	16		69	331										331	549
	4	01/17-01/23	35			35	84										84	166
	5	01/24-01/30	46	37		83	378										378	538
	6	01/31-02/06	8			8	320										320	373
	7	02/07-02/13	59			59	145										147	438
	8	02/14-02/20	9	8		17	59								2		59	132
	9	02/21-02/27	83	5		88	113										113	311
	10	02/28-03/05	145			145	197										197	558
	11	03/06-03/12	24	10		34	299										299	697
	12	03/13-03/19	117			117	496										496	1,361
	13	03/20-03/26	10			10	302										302	1,117
	14	03/27-04/02	25			25	191			33							224	2,184
	15	04/03-04/09	172			172	372			13							385	1,331
	16	04/10-04/16	51	20		71	566										566	2,572
Winter Totals			1,353	121	0	1,474	16,844	0	46	0	0	0	0	0	4	0	16,894	48,152
	23	05/29-06/04				0											0	4
	24	06/05-06/11				0	10										10	2,291
	25	06/12-06/18				0		115									115	1,259
	26	06/19-06/25				0	39	56									95	1,115
	27	06/26-07/02	61	4,716		4,777	4,677	133									4,810	12,156
	28	07/03-07/09	930	12,290		13,220	36,197	1,639	2,097	210	432	793	2,372			400	44,140	69,944
	29	07/10-07/16	415	5,110	169	5,694	24,071	1,155	2,206	125	2,665	2,274	8,932	889	48	3,806	46,171	59,343
Summer Totals			1,406	22,116	169	23,691	64,994	3,098	4,303	335	3,097	3,067	11,304	889	48	4,206	95,341	146,112
Season Totals			2,759	22,237	169	25,165	81,838	8,196	4,349	335	3,097	3,067	11,304	889	52	4,206	112,235	194,264

* District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Table 4. Hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

-26-

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant							
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total	
1987	40	09/27-10/03				27	2	35	64	8	54		60	86		208	
	41	10/04-10/10	3	7		55	67	22	154	121	164		470	137		892	
	42	10/11-10/17	18	28		108	95	58	307	114	238		269	125		746	
	43	10/18-10/24	11	1		80	51	47	190	161	122		111	110		504	
	44	10/25-10/31		23	6	49	2	79	159	107	73			220		400	
	45	11/01-11/07	7	13		57	6	79	162	18	17		1	93		129	
	46	11/08-11/14	3			11	18	36	68	16	11		3	207		237	
	47	11/15-11/21	8	9		16	2	36	71	16	9			95		120	
	48	11/22-11/28	1	3			19	8	31	7				24		31	
	49	11/29-12/05			1	2	10	65	78	9				19		28	
	50	12/06-12/12				15	9	13	37	17				19		36	
	51	12/13-12/19		2		4			6		3			18		21	
	52	12/20-12/26		1				1	2							0	
	53	12/27-12/31				9		15	24	3						3	
	1988	1	01/01-01/02						3	3							0
		2	01/03-01/09				9	11	8	28	7				13		20
3		01/10-01/16				6		6	12	2				4	1	7	
4		01/17-01/23				22		8	30	31				33		64	
5		01/24-01/30				7		3	10	6	4			19		29	
6		01/31-02/06				9			9	6				16		22	
7		02/07-02/13	1	10		2	5	1	19					22		22	
8		02/14-02/20				10	6	10	26		2			5		7	
9		02/21-02/27	1			9		3	13	2				35		37	
10		02/28-03/05	1			15	18	6	40		9		2	48		59	
11		03/06-03/12			23	25	21	9	78	9				22		31	
12		03/13-03/19	4		8	69	11	12	104	28	10			54		92	
13		03/20-03/26	5		2	64	23	1	95	9	1			55		65	
14		03/27-04/02	7		31	57	1	6	102	68	26			35		129	
15		04/03-04/09	4	13		5	17	23	62	50	19			37		106	
16		04/10-04/16	2	8	34	68	28	27	167	82	19			24		125	
Winter Totals			76	118	105	810	422	620	2,151	897	781	0	916	1,575	1	4,170	
	23	05/29-06/04	24						24							0	
	24	06/05-06/11	177	49		94			320	45	249					294	
	25	06/12-06/18	110	72		139			321	38	64					102	
	26	06/19-06/25	82	16		184			282	43	19					62	
	27	06/26-07/02	110	60		427	22		619	483	377		532			1,392	
	28	07/03-07/09	193	283	152	327	118	7	1,080	1,846	911	24	1,161			3,942	
	29	07/10-07/16	111	145	120	229	6	4	615	1,010	608	6	688			2,312	
Summer Totals			807	625	272	1,400	146	11	3,261	3,465	2,228	30	2,381	0	0	8,104	
Season Totals			883	743	377	2,210	568	631	5,412	4,362	3,009	30	3,297	^a	1	12,274	

- Continued -

Table 4. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant								Grand Total		
			103	104	152	Total	113	114	116	154	157	181	183	189		Total	
1987	40	09/27-10/03				0	256								256	528	
	41	10/04-10/10				0	218						4		222	1,268	
	42	10/11-10/17		48		48	167						1		168	1,269	
	43	10/18-10/24				0	122								122	816	
	44	10/25-10/31				0	111						2		113	672	
	45	11/01-11/07	8			8	31								31	330	
	46	11/08-11/14				0	17								17	322	
	47	11/15-11/21	12			12	10								10	213	
	48	11/22-11/28				0	31								31	93	
	49	11/29-12/05				0	34								34	140	
	50	12/06-12/12	7			7	12								12	92	
	51	12/13-12/19	43			43	31								31	101	
	52	12/20-12/26				0	2								2	4	
	53	12/27-12/31				0	24								24	51	
	1988	1	01/01-01/02				0									0	3
		2	01/03-01/09	34			34	42								42	124
3		01/10-01/16	1			1	48								48	68	
4		01/17-01/23	3			3	15								15	112	
5		01/24-01/30				0	48								48	87	
6		01/31-02/06	1			1	47								47	79	
7		02/07-02/13	3			3	28								28	72	
8		02/14-02/20				0	2						8		10	43	
9		02/21-02/27	3			3	1						5		6	59	
10		02/28-03/05	9			9	16						1		17	125	
11		03/06-03/12	1			1	20								20	130	
12		03/13-03/19	1			1	6								6	203	
13		03/20-03/26				0	10								10	170	
14		03/27-04/02	17			17	13						9		22	270	
15		04/03-04/09	7			7	10						4		14	189	
16		04/10-04/16	7			7	33						12		45	344	
Winter Totals			157	48	0	205	1,405	0	0	0	0	0	46	0	1,451	7,977	
	23	05/29-06/04				0									0	24	
	24	06/05-06/11				0	2								2	616	
	25	06/12-06/18				0		1							1	424	
	26	06/19-06/25				0	12								12	356	
	27	06/26-07/02	182	803		985	1,121	586				44	13		1,764	4,760	
	28	07/03-07/09	539	1,877		2,416	2,992	1,232	84		42	38	213	45	4,646	12,084	
	29	07/10-07/16	376	649	2	1,027	1,449	591		45	220	22	123		2,450	6,404	
Summer Totals			1,097	3,329	2	4,428	5,576	2,410	84	45	262	104	349	45	8,875	24,668	
Season Totals			1,254	3,377	2	4,633	6,981	3,985	84	45	262	104	395	45	10,326	32,645	

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Table 5. Harvest of chinook salmon in the Southeast Alaska experimental troll fisheries directed at Alaska hatchery fish, 1988.

Area Hatchery Stat. Area	Inclusive Dates				Total
	6/06-6/07	6/13-6/14	6/20-6/21	6/27-6/28	
Lower Clarence Strait W. Gravina Is., Tongass Narrows, Nichols Passage, Ship Is. 101-27, 101-29, 101-41, 102-80	550	785	205	267	1,807
Lower Chatham Strait Little Port Walter 109-10	708	218	633	1,718	3,277
Frederick Sound Crystal Lake 110-16/17	1,346	367	217	222	2,152
Silver Bay Medvejie 113-35	12		51	53	116
Cross Sound ^a		116	56	39	211
Totals	2,616	1,486	1,162	2,299	7,563

^a This fishery does not target chinook salmon.

Table 6. Terminal and cost recovery harvests of chinook salmon in Southeast Alaska, 1988.

Hatchery (Stat. Area)	Terminal Harvests			Cost Recovery	Total
	Troll	Seine	Gillnet		
Nakat Inlet (101-11)				9	9
Herring Cove (101-45)				403	403
Carroll Inlet (101-45)	380			44	424
Neets Bay (101-95)	12	146	227	7,821	8,206
Crystal Lake (106-44)	726		1,857	1,372	3,955
Earl West Cove (107-40)	53			353	406
Blind Slough (108-40)			570		570
Hidden Falls (112-22)		494		46	540
Deep Inlet (113-41)				1	1
Totals	1,171	640	2,654	10,049	14,514

Table 7. Purse seine harvest of large chinook salmon (≥ 28 in) in Southeast Alaska by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District								Total
		101	102	103	104	109	112	113	114	
28	07/03-07/09	141					169			310
29	07/10-07/16						162			162
30	07/17-07/23					1	55			56
31	07/24-07/30							1	5	6
32	07/31-08/06				9	1				10
33	08/07-08/13	112	116		5,025	28	23			5,304
34	08/14-08/20	8	23	3	2,063	23	107			2,227
35	08/21-08/27		55	102	2,785	24	9		7	2,982
36	08/28-09/03			4	15	1				20
Totals		261	194	109	9,897	78	525	1	12	11,077

Table 8. Purse seine harvest of small chinook salmon (< 28 in) in Southeast Alaska by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District										Total
		101	102	103	104	105	109	110	112	113	114	
28	07/03-07/09	7			10				86			103
29	07/10-07/16	35	4		72		10	2	77	2	8	210
30	07/17-07/23	1			64		53		16			134
31	07/24-07/30				1	3	34		1	5		44
32	07/31-08/06	3	11		15		2					31
33	08/07-08/13		29		21		54		9			113
34	08/14-08/20	2			20		3		22	1		48
35	08/21-08/27		8	1	10		39		2		71	131
36	08/28-09/03			5		7	13			2		27
37	09/04-09/10		80	13			5					98
38	09/11-09/17		1								3	4
39	09/18-09/24		35									35
40	09/25-10/01		9									9
41	10/02-10/08		45									45
Totals		48	222	19	213	10	213	2	213	10	82	1,032

Table 9. Gillnet harvest of chinook salmon in Southeast Alaska by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District						Total
		101	102	106	108	111	115	
24	06/05-06-11			68				68
25	06/12-06/18			122	90			212
26	06/19-06/25	599		287	96	257	7	1,246
27	06/26-07/02	707		923	89	336	48	2,103
28	07/03-07/09	521		851	249	243	100	1,964
29	07/10-07/16	369		322	225	275	145	1,336
30	07/17-07/23	137		152	27	267	59	642
31	07/24-07/30	83		36		41	318	478
32	07/31-08/06	98		86		30	246	460
33	08/07-08/13	61		7		53	87	208
34	08/14-08/20	20		100		72	51	243
35	08/21-08/27	3	6	5		118	26	158
36	08/28-09/03	5		2		35	33	75
37	09/04-09/10	1				48	35	84
38	09/11-09/17	2				2	27	31
39	09/18-09/24	2				1	17	20
40	09/25-10/01						53	53
41	10/02-10/08						5	5
Totals		2,608	6	2,961	776	1,778	1,257	9,386

Table 10. Canadian inriver harvests of chinook salmon from the Alsek, Taku, and Stikine Rivers, 1988.

a Stat. Week	Start Date	Stikine River											
		Lower River Commercial			Upper River Commercial			Upper River Subsistence			Stikine Total		
		Large	Small	Total	Large	Small	Total	Large	Small	Total	Large	Small	Total
26	June 19	-----closed-----						194	59	253	194	59	253
27	26	390	105	495	44	24	68	249	44	293	683	173	856
28	July 3	319	44	363	81	9	90	248	53	301	648	106	754
29	10	71	7	78	11	9	20	95	13	108	177	29	206
30	17	104	18	122	38	4	42	175	19	194	317	41	358
31	24	66	8	74	10		10	111	9	120	187	17	204
32	31	34	13	47	1		1	96		96	131	13	144
33	Aug. 7	20	6	26				8		8	28	6	34
34	14	2		2	-----closed-----			2		2	4		4
35	21	1		1				-----closed-----			1		1
Totals		1,007	201	1,208	185	46	231	1,178	197	1,375	2,370	444	2,814

Stat. Week	Start Date	Alsek River			Taku River			All Systems Combined		
		Alsek Sport & Subsistence			Taku Commercial			Canadian Total		
		Sport	IFF ^b	Total	Large	Small ^c	Total	Large ^d	Small	Total
26	June 19	-----closed-----						194	59	253
27	26	3		3	335	123	458	1,021	296	1,317
28	July 3	28		28	82	34	116	758	140	898
29	10	48	3	51	75	15	90	303	44	347
30	17	14	6	20	37	10	47	374	51	425
31	24	66	18	84	20	2	22	291	19	310
32	31	62	7	69	3	1	4	203	14	217
33	Aug. 7	18	4	22	1	1	2	51	7	58
34	14	5	0	5	0		0	9		9
35	21	4	2	6	2		2	9		9
36	28	0	3	3				3		3
37	Sept. 4	1		1	-----closed-----			1		1
Totals		249	43	292	555	186	741	3,217	630	3,847

^a From TTC, 1989.

^b IFF - Indian food fishery.

^c Canadian data provided by size class, small fish were defined as < 5 lb, < 500 mm, and ocean age .2 or less.

^d Some small fish may be included from the Alsek Indian food fishery.

Table 11. Sport harvest of chinook salmon in Southeast Alaska, 1988 (from Mills 1989).

Area	Small <28in	Large ≥28in	Total
Ketchikan	617	6,805	7,422
Prince of Wales Island	68	1,067	1,135
Petersburg-Wrangell Kake-Stikine	103	4,565	4,668
Sitka	115	3,424	3,539
Juneau	461	7,423	7,884
Haines-Skagway	5	784	789
Glacier Bay	3	435	438
Yakutat	1	284	285
Totals	1,373	24,787	26,160

Table 12. Age composition of chinook salmon in the Southeast Alaska winter troll harvest, 1987 to 1988.

Brood Year and Age Class ^a									
	1985	1984	1983		1982		1981		
Northwest Quadrant:									
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987) Sample Weeks 40 - 53 (1 Oct. - 31 Dec.) ^b									
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Sample Size	1	433	10	220	193	8	44	1	910
Percent	0.1	47.6	1.1	24.2	21.2	0.9	4.8	0.1	100.0
Std. Error	0.1	1.6	0.3	1.4	1.3	0.3	0.7	0.1	
Catch	14	6,177	143	3,138	2,753	114	628	14	12,981
Catch Weeks 1 - 16 (1 Jan. - 16 Apr. 1988) Sample Weeks 2 - 16 (3 Jan. - 16 Apr.)									
		0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Sample Size		132	11	127	99	8	51	2	430
Percent		30.7	2.6	29.5	23.0	1.9	11.9	0.5	100.0
Std. Error		2.1	0.7	2.1	1.9	0.6	1.5	0.3	
Catch		1,647	137	1,584	1,235	100	636	25	5,364
Total									
Catch Weeks 40 - 16 Sample Weeks 40 - 16									
	1	565	21	347	292	16	95	3	1,340
Sample Size	1	565	21	347	292	16	95	3	1,340
Percent	0.1	42.6	1.5	25.7	21.7	1.2	6.9	0.2	100.0
Std. Error	0.1	1.3	0.3	1.1	1.1	0.3	0.7	0.1	
Catch	14	7,823	280	4,723	3,988	214	1,264	39	18,345
Southwest Quadrant:									
Brood Year and Age Class									
	1984		1983		1982				
Catch Weeks 41 - 53 (4 Oct. - 31 Dec. 1987) Sample Weeks 47 - 49 (15 Nov. - 5 Dec.)									
	0.2	1.1	0.3	1.2	1.3	Total			
Sample Size	44		8	26	4	82			
Percent	53.7		9.8	31.7	4.9	100.0			
Std. Error	5.1		3.1	4.8	2.2				
Catch	316		57	187	29	589			
Catch Weeks 2 - 16 (3 Jan. - 16 Apr. 1988) Sample Weeks 3 - 15 (10 Jan. - 9 Apr.)									
	0.3	1.2	0.4	1.3	1.4	Total			
Sample Size	32	2	3	12	7	56			
Percent	57.1	3.6	5.4	21.4	12.5	100.0			
Std. Error	6.5	2.4	3.0	5.4	4.3				
Catch	623	39	58	234	136	1,090			
Total									
Catch Weeks 41 - 16 Sample Weeks 47 - 15									
	76	2	11	38	11	138			
Sample Size	76	2	11	38	11	138			
Percent	55.9	2.3	6.9	25.0	9.8	100.0			
Std. Error	4.6	1.6	2.2	3.9	2.9				
Catch	939	39	116	420	165	1,679			

- Continued -

Table 12. (Page 2 of 3).

Brood Year and Age Class									
	1985	1984	1983		1982		1981		
Northeast Quadrant:									
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987) Sample Weeks 40 - 52 (1 Oct. - 26 Dec.)									
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Sample Size		218	14	137	363	6	430	8	1,176
Percent		18.5	1.2	11.6	30.9	0.5	36.6	0.7	100.0
Std. Error		1.1	0.3	0.9	1.3	0.2	1.4	0.2	
Catch		4,008	257	2,519	6,674	110	7,906	147	21,622
Catch Weeks 2 - 16 (3 Jan. - 16 Apr. 1988) Sample Weeks 2 - 16 (3 Jan. - 16 Apr.)									
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Sample Size	1	129	6	56	150	2	167	6	517
Percent	0.2	25.0	1.2	10.8	29.0	0.4	32.3	1.2	100.0
Std. Error	0.2	1.8	0.5	1.3	1.9	0.3	2.0	0.5	
Catch	11	1,449	67	629	1,685	22	1,876	67	5,807
Total									
Catch Weeks 40 - 16 Sample Weeks 40 - 16									
Sample Size	1	347	20	193	513	8	597	14	1,693
Percent	<0.1	19.9	1.2	11.5	30.5	0.5	35.7	0.8	100.0
Std. Error	<0.1	1.0	0.3	0.8	1.1	0.2	1.2	0.2	
Catch	11	5,457	325	3,148	8,359	133	9,782	214	27,429
Southeast Quadrant:									
Brood Year and Age Class									
	1985	1984	1983		1982		1981		
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987) Sample Weeks 40 - 52 (1 Oct. - 26 Dec.)									
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Sample Size		239	3	155	588	2	176	3	1,166
Percent		20.5	0.3	13.3	50.4	0.2	15.1	0.3	100.0
Std. Error		1.0	0.1	0.9	1.3	0.1	0.9	0.1	
Catch		1,078	14	699	2,653	9	794	14	5,260
Catch Weeks 1 - 16 (1 Jan. - 16 Apr. 1988) Sample Weeks 10 - 16 (28 Feb. - 16 Apr.)									
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Sample Size	1	131	14	22	68		22	1	259
Percent	0.4	50.6	5.4	8.5	26.3		8.5	0.4	100.0
Std. Error	0.4	3.0	1.4	1.7	2.6		1.7	0.4	
Catch	13	1,728	185	290	897		290	13	3,416
Total									
Catch Weeks 40 - 16 Sample Weeks 40 - 16									
Sample Size	1	370	17	177	656	2	198	4	1,425
Percent	0.2	32.3	2.3	11.4	40.9	0.1	12.5	0.3	100.0
Std. Error	0.1	1.3	0.5	0.8	1.3	0.1	0.9	0.2	
Catch	13	2,806	198	989	3,549	9	1,084	27	8,676

- Continued -

Table 12. (Page 3 of 3).

Combined Quadrants	Brood Year and Age Class								
	1985	1984	1983		1982		1981		
<u>1987 Winter Troll</u>									
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Sample Size	1	934	27	520	1,170	16	654	12	3,334
Percent	<0.1	28.0	0.8	15.6	35.1	0.5	19.6	0.4	100.0
Catch	14	11,579	414	6,413	12,267	233	9,357	175	40,452
<u>1988 Winter Troll</u>									
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Sample Size	2	424	33	208	329	10	247	9	1,262
Percent	0.2	33.6	2.6	16.5	26.1	0.8	19.6	0.7	100.0
Catch	24	5,447	428	2,561	4,051	122	2,938	105	15,677
<u>1987 - 1988 Winter Troll Totals</u>									
Sample Size	3	1,358	60	728	1,499	26	901	21	4,596
Percent	0.1	29.5	1.3	15.8	32.6	0.6	19.6	0.5	100.0
Catch	38	17,025	842	8,976	16,316	356	12,295	280	56,129

^a Ocean age increases by 1 on January 1 to standardize to correct brood year.

^b Catch weeks are statistical weeks when the fishery was open and catches were recorded. Sample weeks are the catch weeks which were sampled for age, length, and coded-wire tags.

Table 13. Age composition of chinook salmon in the Southeast Alaska summer troll harvest, 1988.

Brood Year and Age Class										
	1985	1984		1983		1982		1981		Total
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6	1.5	
Northwest Quadrant:										
Statistical Week	27	(June 26 - July 2)								
Sample Size		92	2	87	14	6	7			208
Percent		44.2	1.0	41.8	6.7	2.9	3.4			100.0
Std. Error		3.4	0.7	3.4	1.7	1.1	1.2			
Catch		3,013	65	2,848	458	196	229			6,809
Statistical Week	28	(July 3 - 9)								
Sample Size	12	307	18	223	81	18	36	1		696
Percent	1.7	44.1	2.6	32.0	11.6	2.6	5.2	0.1		100.0
Std. Error	0.5	1.9	0.6	1.8	1.2	0.6	0.8	0.1		
Catch	841	21,519	1,262	15,631	5,678	1,262	2,523	70		48,786
Statistical Week	29	(July 10 - 16)								
Sample Size	9	583	35	374	100	25	35		4	1,165
Percent	0.8	50.0	3.0	32.1	8.6	2.1	3.0		0.3	100.0
Std. Error	0.3	1.4	0.5	1.4	0.8	0.4	0.5		0.2	
Catch	376	24,331	1,461	15,609	4,173	1,043	1,461		167	48,621
Combined Periods (Percentages are weighted by period catches)										
Sample Size	21	982	55	684	195	49	78	1	4	2,069
Percent	1.2	46.9	2.7	32.7	9.9	2.4	4.0	0.1	0.2	100.0
Std. Error	0.3	1.1	0.4	1.1	0.7	0.3	0.5	0.1	0.1	
Catch	1,217	48,863	2,788	34,088	10,309	2,501	4,213	70	167	104,216
Southwest Quadrant:										
Brood Year and Age Class										
	1986	1985	1984		1983		1982			Total
	0.1	0.2	0.3	1.2	0.4	1.3	0.5	1.4		
Statistical Week	28	(July 3 - 9)								
Sample Size		13	158	34	30	35		3		273
Percent		4.8	57.9	12.5	11.0	12.8		1.1		100.0
Std. Error		1.3	3.0	2.0	1.9	2.0		0.6		
Catch		1,019	12,385	2,665	2,351	2,743		235		21,398
Statistical Week	29	(July 10 - 16)								
Sample Size	1	10	201	53	46	54	4	8		377
Percent	0.3	2.7	53.3	14.1	12.2	14.3	1.1	2.1		100.0
Std. Error	0.3	0.8	2.5	1.7	1.6	1.8	0.5	0.7		
Catch	18	178	3,583	945	820	963	71	143		6,721
Combined Periods (Percentages are weighted by period catches)										
Sample Size	1	23	359	87	76	89	4	11		650
Percent	0.1	4.3	56.8	12.8	11.3	13.2	0.3	1.3		100.0
Std. Error	0.1	1.0	2.3	1.6	1.5	1.6	0.1	0.5		
Catch	18	1,197	15,968	3,610	3,171	3,706	71	378		28,119

- Continued -

Table 13. (Page 2 of 2).

		Brood Year and Age Class							
		1985	1984		1983		1982		
		0.2	0.3	1.2	0.4	1.3	0.5	1.4	Total
Northeast Quadrant:									
Statistical Week	28	(July 3 - 9)							
Sample Size	2	49	13	28	102	6	22	222	
Percent	0.9	22.1	5.9	12.6	45.9	2.7	9.9	100.0	
Std. Error	0.6	2.8	1.6	2.2	3.3	1.1	2.0		
Catch	166	4,068	1,079	2,324	8,466	498	1,826	18,427	
Statistical Week	29	(July 10 - 16)							
All Fish									
Sample Size		44	8	17	12	2	1	84	
Percent		52.4	9.5	20.2	14.3	2.4	1.2	100.0	
Std. Error		5.4	3.2	4.4	3.8	1.7	1.2		
Catch		3,660	665	1,414	998	166	83	6,986	
Combined Periods (Percentages are weighted by period catches)									
Sample Size	2	93	21	45	114	8	23	306	
Percent	0.7	30.4	6.9	14.7	37.2	2.6	7.5	100.0	
Std. Error	0.5	2.5	1.4	2.0	2.6	0.9	1.5		
Catch	166	7,728	1,744	3,738	9,464	664	1,909	25,413	

Southeast Quadrant:

		Brood Year and Age Class						
		1985	1984		1983		1982	
		0.2	0.3	1.2	0.4	1.3	1.4	Total
Statistical Weeks	28 - 29	(July 3 - 16)						
Sample Size	6	64	65	15	66	13	229	
Percent	2.6	27.9	28.4	6.6	28.8	5.7	100.0	
Std. Error	1.0	2.9	3.0	1.6	3.0	1.5		
Catch	341	3,642	3,699	854	3,756	740	13,032	

Combined Quadrants

Brood Year and Age Class											
	1986	1985	1984		1983		1982		1981		
	0.1	0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6	1.5	Total
Statistical Week 27											
Sample Size			92	2	87	14	6	7			208
Percent			44.2	1.0	41.8	6.7	2.9	3.4			100.0
Catch			3,013	65	2,848	458	196	229			6,809
Statistical Week 28											
Sample Size		33	578	130	296	284	24	74	1		1,420
Percent		2.3	40.7	9.2	20.8	20.0	1.7	5.2	0.1		100.0
Catch		2,367	41,614	8,705	21,160	20,643	1,760	5,324	70		101,643
Statistical Week 29											
Sample Size	1	19	828	96	437	166	31	44		4	1,626
Percent	0.1	1.2	50.9	5.9	26.9	10.2	1.9	2.7		0.2	100.0
Catch	18	554	31,574	3,071	17,843	6,134	1,280	1,687		167	62,328
Combined Periods											
Sample Size	1	52	1,498	228	820	464	61	125	1	4	3,254
Percent	<0.1	1.6	46.0	7.0	25.2	14.3	1.9	3.8	<0.1	0.1	100.0
Catch	18	2,921	76,201	11,841	41,851	27,235	3,236	7,240	70	167	170,780

Table 14. Test for significant changes among periods in the age composition of chinook salmon in the summer troll catch by age class, 1988.

	Brood Year and Age Class									
	1986	1985	1984		1983		1982		1981	
	0.1	0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6	1.5
<u>Northwest Quadrant:</u>										
<u>Periods Compared</u>										
27 , 28					S**	S				
27 , 29					S**					
28 , 29		S	S**			S*		S*		
<u>Southwest Quadrant:</u>										
28 , 29										
<u>Northeast Quadrant:</u>										
28 , 29			S**			S**		S**		
S = significant at probability = 0.10										
S* = significant at probability = 0.05										
S** = significant at probability = 0.01										

Table 15. Age composition of chinook salmon sampled from the spring experimental troll fishery in Southeast Alaska, 6-28 June 1988.

	Brood Year and Age Class									
	1985	1984		1983		1982		1981	1980	Total
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	1.6	
Lower Clarence Strait										
Sample Size	6	42	44	11	124	1	26	1		255
Percent	2.4	16.5	17.3	4.3	48.6	0.4	10.2	0.4		100.0
Std. Error	0.9	2.2	2.2	1.2	2.9	0.4	1.8	0.4		
Catch	43	298	312	78	879	7	184	7		1,807
Wrangell Narrows ^a										
Sample Size		5	2	4	26		121			159
Percent		3.1	1.3	2.5	16.4		76.1			100
Std. Error		1.2	0.8	1.1	2.6		3			
Catch		23	9	18	119		552			726
Lower Chatham Strait										
Sample Size	5	243	55	102	255	5	66	4		735
Percent	0.7	33.1	7.5	13.9	34.7	0.7	9.0	0.5		100.0
Std. Error	0.3	1.5	0.9	1.1	1.5	0.3	0.9	0.2		
Catch	22	1,083	245	455	1,137	22	294	18		3,277
Frederick Sound										
Sample Size	6	366	62	65	393	5	278	7	1	1,183
Percent	0.5	30.9	5.2	5.5	33.2	0.4	23.5	0.6	0.1	100.0
Std. Error	0.1	0.9	0.4	0.4	0.9	0.1	0.8	0.1	0.1	
Catch	11	666	113	118	715	9	506	13	2	2,152
Silver Bay										
Sample Size	6	43	2	1	16		2			70
Percent	8.6	61.4	2.9	1.4	22.9		2.9			100.0
Std. Error	2.1	3.7	1.3	0.9	3.2		1.3			
Catch	10	71	3	2	27		3			116
Cross Sound ^b										
Sample Size		33	5	4	2		1			45
Percent		73.3	11.1	8.9	4.4		2.2			100.0
Std. Error		5.9	4.2	3.8	2.8		2.0			
Catch		155	23	19	9		5			211
Combined Areas										
Sample Size	23	732	170	187	816	11	494	12	1	2,447
Percent	0.9	29.9	6.9	7.6	33.3	0.4	20.2	0.5		100.0
Catch	86	2,296	705	690	2,886	38	1,544	38	2	8,289

^a Wrangell Narrows is a terminal troll fishery in 1988.

^b This fishery does not target on Alaska hatchery chinook salmon.

Table 16. Mean length-at-age for chinook salmon harvested in the Southeast Alaska winter troll fishery, 1987 to 1988.

Brood Year and Age Class									
	1985	1984	1983		1982		1981		
Northwest Quadrant:									
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987)	Sample Weeks 40 - 53 (1 Oct. - 31 Dec.)								
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Avg. Length	680	677	651	778	707	834	786		712
Std. Error		2.5	8.6	5.7	5.1	31.6	17.6		2.8
Sample Size	1	316	7	136	155	7	30		652
Catch Weeks 1 - 16 (1 Jan. - 16 Apr. 1988)	Sample Weeks 2 - 16 (3 Jan. - 16 Apr.)								
		0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Avg. Length		750	699	848	819	826	902	900	812
Std. Error		5.8	9.7	5.6	5.0	37.8	7.6		4.1
Sample Size		114	11	104	86	7	42	1	365
Total									
Catch Weeks 40 - 16	Sample Weeks 40 - 16								
Avg. Length	680	696	680	808	747	830	854	900	748
Std. Error		2.9	8.7	4.6	5.1	23.7	10.9		2.8
Sample Size	1	430	18	240	241	14	72	1	1,017
Southwest Quadrant:									
Brood Year and Age Class									
	1984		1983		1982				
Catch Weeks 41 - 53 (4 Oct. - 31 Dec. 1987)	Sample Weeks 47 - 49 (15 Nov. - 5 Dec.)								
	0.2	1.1	0.3	1.2	1.3	Total			
Avg. Length	671		870	719	830	713			
Std. Error	6.5		16.1	14.1	25.6	9.2			
Sample Size	44		8	26	4	82			
Catch Weeks 2 - 16 (3 Jan. - 16 Apr. 1988)	Sample Weeks 3 - 15 (10 Jan. - 9 Apr.)								
	0.3	1.2	0.4	1.3	1.4	Total			
Avg. Length	726	820	832	825	898	778			
Std. Error	11.4	30.0	28.0	20.9	52.2	13.2			
Sample Size	32	2	3	12	7	56			
Total									
Catch Weeks 41 - 16	Sample Weeks 47 - 15								
Avg. Length	694	820	860	752	873	739			
Std. Error	6.8	30.0	14.3	14.1	34.9	8.1			
Sample Size	76	2	11	38	11	138			

- Continued -

Table 16. (Page 2 of 3).

Brood Year and Age Class								
	1985	1984	1983		1982		1981	
Northeast Quadrant:								
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987) Sample Weeks 40 - 52 (1 Oct. - 26 Dec.)								
	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Avg. Length	665	636	742	690	803	746	857	715
Std. Error	3.5	14.4	7.8	3.0	15.8	3.4	24.1	2.3
Sample Size	147	8	92	259	5	348	7	866
Catch Weeks 2 - 16 (3 Jan. - 16 Apr. 1988) Sample Weeks 2 - 16 (3 Jan. - 16 Apr.)								
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5 Total
Avg. Length	640	706	698	810	725	860	806	877 757
Std. Error		4.1	21.4	11.3	5.5	70.0	5.8	36.0 3.7
Sample Size	1	120	6	48	139	2	157	6 479
Total								
Catch Weeks 40 - 16 Sample Weeks 40 - 16								
Avg. Length	640	683	663	765	702	819	765	866 730
Std. Error		2.9	15.3	6.9	2.8	21.5	3.2	20.3 2.1
Sample Size	1	267	14	140	398	7	505	13 1,345
Southeast Quadrant:								
Brood Year and Age Class								
	1985	1984	1983		1982		1981	
Catch Weeks 40 - 53 (1 Oct. - 31 Dec. 1987) Sample Weeks 40 - 52 (1 Oct. - 26 Dec.)								
	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Avg. Length	665	640	737	700	788	786	877	712
Std. Error	2.7		5.4	2.1	32.5	5.2	63.3	2.0
Sample Size	226	3	151	548	2	168	3	1,101
Catch Weeks 1 - 16 (1 Jan. - 16 Apr. 1988) Sample Weeks 10 - 16 (28 Feb. - 16 Apr.)								
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5 Total
Avg. Length	705	720	665	854	747		842	925 749
Std. Error		4.5	12.2	17.0	7.8		19.5	5.2
Sample Size	1	118	10	22	57		21	1 230
Total								
Catch Weeks 40 - 16 Sample Weeks 40 - 16								
Avg. Length	705	684	659	752	704	788	792	889 718
Std. Error		2.7	11.6	6.0	2.1	32.5	5.3	46.4 1.9
Sample Size	1	344	13	173	605	2	189	4 1,331

- Continued -

Table 16. (Page 3 of 3).

Combined Quadrants	Brood Year and Age Class								Total
	1984	1983	1982		1981		1980		
<u>1987 Winter Troll</u>									
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	1.4	Total
Avg. Length	680	671	643	755	699	816	761	863	713
Sample Size	1	733	18	387	988	14	550	10	2,701
<u>1988 Winter Troll</u>									
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	Total
Avg. Length	673	725	695	838	761	834	830	886	774
Sample Size	2	384	29	177	294	9	227	8	1,130
<u>1987 - 1988 Winter Troll Totals</u>									
Avg. Length	693	689	706	778	713	751	780	873	731
Sample Size	79	1,043	56	591	1,255	161	766	18	3,693

Table 17. Mean length-at-age for chinook salmon harvested in the Southeast Alaska summer troll fishery, 1988.

		Brood Year and Age Class								
		1985	1984		1983		1982		1981	
		0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6	1.5
		Total								
Northwest Quadrant:										
Statistical Week 27 (June 26 - July 2)										
Avg. Length			802	703	879	815	902	936		840
Std. Error			9.2	22.5	11.6	10.1	12.0	34.8		8.0
Sample Size			45	2	36	6	3	6		98
Statistical Week 28 (July 3 - 9)										
Avg. Length		675	816	707	907	795	947	890	885	843
Std. Error		5.0	6.0	15.5	5.8	12.2	13.4	31.9		5.1
Sample Size		2	128	9	86	40	8	12	1	286
Statistical Week 29 (July 10 - 16)										
Avg. Length		628	802	698	884	784	966	954		843
Std. Error			4.8	11.6	6.9	12.6	24.3	29.1		4.7
Sample Size		1	171	11	97	28	9	10		328
Combined Periods (Lengths weighted by period catches)										
Avg. Length		652	808	703	894	792	953	923	885	843
Std. Error		15.9	3.5	8.5	4.3	8.2	12.9	18.9		3.2
Sample Size		3	344	22	219	74	20	28	1	712
Southwest Quadrant:										
		Brood Year and Age Class								
		1985	1984		1983		1982			
		0.2	0.3	1.2	0.4	1.3	0.5	1.4	Total	
Statistical Week 28 (July 3 - 9)										
Avg. Length		652	741	680	849	744		770		743
Std. Error		6.9	5.0	7.2	14.7	13.1		20.0		5.0
Sample Size		9	126	21	22	26		2		206
Statistical Week 29 (July 10 - 16)										
Avg. Length		679	785	723	881	791	865	938		791
Std. Error		16.1	6.6	12.1	9.4	14.4	23.6	21.3		5.6
Sample Size		8	142	45	39	32	3	7		276
Combined Periods (Lengths weighted by period catches)										
Avg. Length		659	751	690	857	755	865	810		754
Std. Error		8.8	4.4	8.9	8.2	10.3	23.6	29.7		4.0
Sample Size		17	268	66	61	58	3	9		482
Northeast Quadrant:										
		Brood Year and Age Class								
		1985	1984		1983		1982			
		0.2	0.3	1.2	0.4	1.3	0.5	1.4	Total	
Statistical Week 28 (July 3 - 9)										
Avg. Length		627	740	642	824	719	780	807		742
Std. Error		13.0	13.6	12.3	20.2	6.2	55.7	24.7		6.6
Sample Size		2	34	10	22	89	5	21		183
Statistical Week 29 (July 10 - 16)										
Avg. Length			833		936	864	955			856
Std. Error			16.3		27.7	29.0				14.2
Sample Size			19		4	5	1			29
Combined Periods (Lengths weighted by period catches)										
Avg. Length		627	765	642	855	759	828	807		773
Std. Error		13.0	12.1	12.3	19.2	6.9	54.1	24.7		6.6
Sample Size		2	53	10	26	94	6	21		212

- Continued -

Table 17. (Page 2 of 2).

Southeast Quadrant:

		Brood Year and Age Class						Total
		1985	1984		1983		1982	
		0.2	0.3	1.2	0.4	1.3	1.4	
Statistical Weeks	28 - 29	(July 3 - 16)						
Avg. Length		663	755	668	874	757	796	742
Std. Error		30.4	9.1	5.6	18.1	8.1	17.1	5.8
Sample Size		4	57	54	15	57	13	200

Combined Quadrants:

		Brood Year and Age Class									
		1985	1984		1983		1982		1981		
		0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6	1.5	Total
Statistical Week	27										
Avg. Length			802	703	879	815	902	936			840
Sample Size			45	2	36	6	3	6			98
Statistical Week	28										
Avg. Length	652	774	677	883	743	883	833	885			785
Sample Size	13	288	40	130	155	13	35	1			675
Statistical Week	29										
Avg. Length	673	797	718	885	794	942	947		843		814
Sample Size	9	332	56	140	65	13	17		1		633
Combined Periods											
Avg. Length	656	780	681	883	766	918	851	885	843		792
Sample Size	26	722	152	321	283	29	71	1	1		1,606

Table 18. Test for significant changes among periods in the length composition of chinook salmon in the summer troll catch by age class, 1988.

	Brood Year and Age Class							
	1985	1984		1983		1982		1981
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	0.6 1.5
Northwest Quadrant:								
Periods Compared								
27 , 28				S*		S**		
27 , 29					S	S**		
28 , 29		S		S**				
Southwest Quadrant:								
28 , 29		S**	S**	S	S**		S**	
Northeast Quadrant:								
28 , 29		S**		S**	S**			
S = significant at probability = 0.10 S* = significant at probability = 0.05 S** = significant at probability = 0.01								

Table 19. Mean length-at-age for chinook salmon sampled from the spring experimental troll fishery in Southeast Alaska, 6-28 June 1988.

	Brood Year and Age Class								
	1985	1984		1983		1982		1981	1980
	0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	1.6
Lower Clarence Strait									
Avg. Length	659	770	683	857	774	795	867		769
Std. Error	15.4	13.8	7.7	26	7.5		21.1		6.4
Sample Size	6	36	32	11	93	1	19		198
Wrangell Narrows ^a									
Avg. Length		710	646	849	729		844	970	820
Std. Error		21.7	39.5	31.4	16		5.5		6.5
Sample Size		4	2	4	24		116	1	151
Lower Chatham Strait									
Avg. Length	625	741	661	865	744	872	850	940	765
Std. Error		5.3	6.2	9.4	5.4	34.2	15.5	38	4.3
Sample Size	1	137	35	54	175	3	47	4	456
Frederick Sound									
Avg. Length	658	680	654	768	706	809	801	829	944
Std. Error	14.9	2.3	4.5	8.8	2.8	63.1	5.2	41.2	2.4
Sample Size	6	362	61	65	392	5	275	7	1,174
Silver Bay									
Avg. Length	686	716	670	660	754		818		724
Std. Error	16.5	9.3	10		20.2		112.5		8.6
Sample Size	4	38	2	1	14		2		61
Cross Sound ^b									
Avg. Length		740	691	775	780		795		741
Std. Error		11.2	10.5	30.3	35				9.3
Sample Size		30	5	4	2		1		42

^a Wrangell Narrows is a terminal troll fishery in 1988.

^b This fishery does not target chinook salmon.

Table 20. Age composition of chinook salmon in the Southeast Alaska purse seine harvest by district, 1988.

Brood Year and Age Class										
	1986	1985		1984		1983		1982		Total
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	0.5	1.4	
District 102										
Statistical Weeks	33	-	35	(August 7 - 27)						
Sample Size		3	4	8		1		1		17
Percent		17.6	23.5	47.1		5.9		5.9		100.0
Std. Error		9.3	10.4	12.2		5.8		5.8		
Catch		73	98	196		24		24		416
District 104										
Statistical Weeks	33	-	35	(August 7 - 27)						
Sample Size	1	43	1	232	20	56	14	4	2	373
Percent	0.3	11.5	0.3	62.2	5.4	15.0	3.8	1.1	0.5	100.0
Std. Error	0.3	1.6	0.3	2.5	1.1	1.8	1.0	0.5	0.4	
Catch	27	1,165	27	6,288	542	1,518	379	108	54	10,110
District 112										
Statistical Weeks	28	-	34	(July 3 - August 20)						
Sample Size	2	4	3	6	9		4		2	30
Percent	6.7	13.3	10.0	20.0	30.0		13.3		6.7	100.0
Std. Error	4.5	6.2	5.5	7.3	8.3		6.2		4.5	
Catch	49	98	74	148	221		98		49	738

Table 21. Mean length-at-age for chinook salmon harvested in the Southeast Alaska purse seine fishery by district, 1988.

Brood Year and Age Class										
	1986	1985		1984		1983		1982		Total
	0.1	0.2	1.1	0.3	1.2	0.4	1.3	0.5	1.4	
District 102										
Statistical Weeks	33	-	35	(August 7 - 27)						
Avg. Length		603	481	795		805		940		702
Std. Error		27.5	50.3	26.7		42.0				
Sample Size		2	4	8		1		1		16
District 104										
Statistical Weeks	33	-	35	(August 7 - 27)						
Avg. Length	445	650		811	678	893	781	974	1010	797
Std. Error		11.9		3.9	17.8	9.2	27.2	38.8		5.4
Sample Size	1	36		198	16	45	13	4	1	314
District 112										
Statistical Weeks	28	-	34	(July 3 - August 20)						
Avg. Length	390	576	432	714	572		750		870	618
Std. Error	15.0	37.0	26.2	26.6	13.1		46.7			25.5
Sample Size	2	4	3	6	9		4		2	30

Table 22. Age composition of chinook salmon in the Southeast Alaska gillnet harvest by district, 1988.

Brood Year and Age Class									
1985		1984		1983		1982	1981		
0.2	1.1	0.3	1.2	0.4	1.3	1.4	1.5	Total	
District 101									
Statistical Weeks 26 - 32 (June 19 - August 6)									
Sample Size	8		5	70	3	65	25	1	177
Percent	4.5		2.8	39.5	1.7	36.7	14.1	0.6	100.0
Std. Error	1.5		1.2	3.6	0.9	3.5	2.5	0.5	
Catch	118		74	1,031	44	958	368	15	2,608
District 111									
Statistical Weeks 27 - 30 (June 26 - July 23)									
Sample Size		1		22		13	14		50
Percent		2.0		44.0		26.0	28.0		100.0
Std. Error		2.0		7.0		6.2	6.3		
Catch		36		782		462	498		1,778
District 115									
Statistical Weeks 27 - 41 (June 26 - October 8)									
Sample Size	8	1		28	1	10	2		50
Percent	16.0	2.0		56.0	2.0	20.0	4.0		100.0
Std. Error	5.1	2.0		6.9	2.0	5.6	2.7		
Catch	201	25		704	25	251	50		1,257

Table 23. Mean length-at-age for chinook salmon harvested in the Southeast Alaska gillnet fishery by district, 1988.

		Brood Year and Age Class								
		1985		1984		1983		1982	1981	
		0.2	1.1	0.3	1.2	0.4	1.3	1.4	1.5	Total
District 101										
Statistical Weeks	26 - 32	(June 19 - August 6)								
	Avg. Length	567		696	646	893	793	934	940	748
	Std. Error	12.1		44.5	6.5	66.1	10.9	16.3		10.2
	Sample Size	7		5	61	3	61	23	1	161
District 111										
Statistical Weeks	27 - 30	(June 26 - July 23)								
All Fish	Avg. Length		460		583		713	850		647
	Std. Error				9.9		13.3	27.3		18.8
	Sample Size		1		19		9	4		33
District 115										
Statistical Weeks	27 - 41	(June 26 - October 8)								
All Fish	Avg. Length	526	475		630	920	721	890		639
	Std. Error	10.5			9.4		24.3	75.0		16.7
	Sample Size	7	1		24	1	5	2		40

Table 24. Age composition of chinook salmon from selected Southeast Alaska sport fisheries, 1988.

Fishery			Brood Year and Age Class								Total
			1985	1984		1983		1982		1981	
			0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	
Ketchikan Creel	Males	Sample Size	2	2	5		2				11
		Percent	18.2	18.2	45.5		18.2				100
		Std. Error ^a	11.6	11.6	15.0		11.6				
	Females	Sample Size			1	1	3		1		6
		Percent			16.7	16.7	50.0		16.7		100
		Std. Error			15.2	15.2	20.4		15.2		
	Total	Sample Size	4	42	106	20	204	2	104	2	484
		Percent	0.8	8.7	21.9	4.1	42.1	0.4	21.5	0.4	100
		Std. Error	0.4	1.3	1.9	0.9	2.2	0.3	1.9	0.3	
Petersburg Creel	Males	Sample Size		6	5	2	25		47	2	87
		Percent		6.9	5.7	2.3	28.7		54.0	2.3	100
		Std. Error		2.7	2.5	1.6	4.9		5.3	1.6	
	Females	Sample Size		4	2	2	29	3	50	1	91
		Percent		4.4	2.2	2.2	31.9	3.3	54.9	1.1	100
		Std. Error		2.1	1.5	1.5	4.9	1.9	5.2	1.1	
	Total	Sample Size	1	26	13	10	110	5	196	4	365
		Percent	0.3	7.1	3.6	2.7	30.1	1.4	53.7	1.1	100
		Std. Error	0.3	1.3	1.0	0.9	2.4	0.6	2.6	0.5	
Wrangell Creel	Males	Sample Size			2		8		16		26
		Percent			7.7		30.8		61.5		100
		Std. Error			5.2		9.1		9.5		
	Females	Sample Size			3		11		24	1	39
		Percent			7.7		28.2		61.5	2.6	100
		Std. Error			4.3		7.2		7.8	2.5	
	Total	Sample Size			11		33		101	1	146
		Percent			7.5		22.6		69.2	0.7	100
		Std. Error			2.2		3.5		3.8	0.7	
Sitka Creel	Males	Sample Size		9		4			2		15
		Percent		60.0		26.7			13.3		100
		Std. Error		12.6		11.4			8.8		
	Females	Sample Size		23		5	2	1	3	1	35
		Percent		65.7		14.3	5.7	2.9	8.6	2.9	100
		Std. Error		8.0		5.9	3.9	2.8	4.7	2.8	
	Total	Sample Size	4	221	14	71	45	2	13	5	375
		Percent	1.1	58.9	3.7	18.9	12.0	0.5	3.5	1.3	100
		Std. Error	0.5	2.5	1.0	2.0	1.7	0.4	0.9	0.6	

- Continued -

Table 24. (Page 2 of 2).

Fishery			Brood Year and Age Class								Total
			1985	1984		1983		1982		1981	
			0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	
Juneau Creel	Males	Sample Size	5	11	12	2	16		17	2	65
		Percent	7.7	16.9	18.5	3.1	24.6		26.2	3.1	100
		Std. Error	3.3	4.7	4.8	2.1	5.3		5.5	2.1	
	Females	Sample Size	5	20	11	10	38		28		112
		Percent	4.5	17.9	9.8	8.9	33.9		25.0		100
		Std. Error	2.0	3.6	2.8	2.7	4.5		4.1		
	Total	Sample Size	12	46	42	16	76		62	2	256
		Percent	4.7	18.0	16.4	6.3	29.7		24.2	0.8	100
		Std. Error	1.3	2.4	2.3	1.5	2.9		2.7	0.6	
Juneau Derby	Males	Sample Size	2	8	8	1	12		2		33
		Percent	6.1	24.2	24.2	3.0	36.4		6.1		100
		Std. Error	4.2	7.5	7.5	3.0	8.4		4.2		
	Females	Sample Size	3	27	10	2	25		4		71
		Percent	4.2	38.0	14.1	2.8	35.2		5.6		100
		Std. Error	2.4	5.8	4.1	2.0	5.7		2.7		
	Total	Sample Size	12	54	29	3	51		6		155
		Percent	7.7	34.8	18.7	1.9	32.9		3.9		100
		Std. Error	2.1	3.8	3.1	1.1	3.8		1.5		
Haines Creel	Males	Sample Size			5		13		29	4	51
		Percent			9.8		25.5		56.9	7.8	100
		Std. Error			4.2		6.1		6.9	3.8	
	Females	Sample Size			3		9		52	3	67
		Percent			4.5		13.4		77.6	4.5	100
		Std. Error			2.5		4.2		5.1	2.5	
	Total	Sample Size			8		23		90	8	129
		Percent			6.2		17.8		69.8	6.2	100
		Std. Error			2.1		3.4		4.0	2.1	

^a Standard error is in percent.

Table 25. Mean length (tip-of-snout to fork-of-tail)-at-age, by sex, of chinook salmon from selected Southeast Alaska sport fisheries, 1988.

Fishery			Brood Year and Age Class								Total
			1985	1984		1983		1982		1981	
			0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	
Ketchikan Creel	Males	Avg. Length	743	815	737		912				11
		Std. Error	32	155	25		119				
		Sample Size	2	2	5		2				
	Females	Avg. Length			685	1,090	833		1,030		6
		Std. Error					38				
		Sample Size			1	1	3		1		
	Total	Avg. Length	714	831	719	940	854	945	973	1,099	479
		Std. Error	22	14	5	22	5	75	8	52	
		Sample Size	4	41	105	20	202	2	103	2	
Petersburg Creel	Males	Avg. Length		817	737	1,040	810		955	1,030	87
		Std. Error		30	37	40	15		13	140	
		Sample Size		6	5	2	25		47	2	
	Females	Avg. Length		780	830	925	863	992	921	1,020	91
		Std. Error		36	90	95	15	49	9		
		Sample Size		4	2	2	29	3	50	1	
	Total	Avg. Length	740	790	755	928	845	1,019	936	1,009	365
		Std. Error		15	29	26	8	43	6	60	
		Sample Size	1	26	13	10	110	5	196	4	
Wrangell Creel	Males	Avg. Length			928		830		1,040		26
		Std. Error			39		25		19		
		Sample Size			2		8		16		
	Females	Avg. Length			804		840		979	1,001	39
		Std. Error			34		26		17		
		Sample Size			3		11		24	1	
	Total	Avg. Length			799		845		986	1,001	146
		Std. Error			24		13		9		
		Sample Size			11		33		101	1	
Sitka Creel	Males	Avg. Length		828		1,010			1,185		15
		Std. Error		28		28			15		
		Sample Size		9		4			2		
	Females	Avg. Length		835		915	812	960	1,000	945	35
		Std. Error		17		14	13		10		
		Sample Size		23		5	2	1	3	1	
	Total	Avg. Length	700	831	760	952	888	970	984	1,011	375
		Std. Error	32	5	11	10	12	10	33	52	
		Sample Size	4	221	14	71	45	2	13	5	

- Continued -

Table 25. (Page 2 of 2).

Fishery			Brood Year and Age Class								Total
			1985	1984		1983		1982		1981	
			0.2	0.3	1.2	0.4	1.3	0.5	1.4	1.5	
Juneau Creel	Males	Avg. Length	732	801	701	910	811		941	1,070	
		Std. Error	18	20	16	20	24		30	50	
		Sample Size	5	11	12	2	16		16	2	64
	Females	Avg. Length	714	783	703	925	811		914		
		Std. Error	12	11	19	27	10		16		
		Sample Size	4	20	11	10	37		27		109
	Total	Avg. Length	718	792	705	931	812		932	1,070	
		Std. Error	11	9	10	18	8		12	50	
		Sample Size	11	46	42	16	75		60	2	252
Juneau Derby	Males	Avg. Length	712	859	705	845	820		862		
		Std. Error	42	27	33		23		72		
		Sample Size	2	8	8	1	12		2		33
	Females	Avg. Length	703	782	703	867	791		867		
		Std. Error	2	10	11	8	11		16		
		Sample Size	3	27	10	2	25		4		71
	Total	Avg. Length	703	802	706	860	795		866		
		Std. Error	11	9	11	9	9		21		
		Sample Size	12	54	29	3	51		6		155
Haines Creel	Males	Avg. Length			740		817		1,009	1,105	
		Std. Error			27		24		17	17	
		Sample Size			5		13		29	4	51
	Females	Avg. Length			731		815		968	1,033	
		Std. Error			3		28		7	28	
		Sample Size			3		9		52	3	67
	Total	Avg. Length			737		816		981	1,070	
		Std. Error			16		17		7	18	
		Sample Size			8		23		90	8	129

Table 26. Peak escapement estimates and weir counts for chinook salmon in Southeast Alaska and transboundary rivers, 1988. Abbreviations for types of surveys are: (A) Aerial (fixed wing), (B) Boat, (F) Foot, (H) Helicopter, and (W) Weir.

Stream Name	Stream Number	Total	Method	Date	Agency
Keta River	101-30-030	575	(H)	08/21	ADF&G ^a
Marten River	101-30-060	543	(H)	08/21	ADF&G
Carroll Creek	101-45-078	152	(F)	08/24	ADF&G
Ketchikan Creek	101-47-025	328	(W)		ADF&G
Wilson River	101-55-020	1	(H)	10/11	ADF&G
Blossom River	101-55-040	384	(H)	08/21	ADF&G
Big Goat Creek	101-60-030	4	(F)	08/06	ADF&G
Chickamin River:					
Barrier Creek	101-71-04A	82	(H)	08/15	ADF&G
Butler Creek	101-71-04B	159	(H)	08/15	ADF&G
Clear Falls Creek	101-71-04C	25	(H)	08/15	ADF&G
Humpy Creek	101-71-04H	19	(H)	08/21	ADF&G
Indian Creek	101-71-04I	32	(H)	08/15	ADF&G
King Creek	101-71-04K	164	(H)	08/30	ADF&G
Leduc River	101-71-04L	25	(H)	08/15	ADF&G
South Fork	101-71-04S	280	(H)	08/21	ADF&G
Unuk River:					
Eulachon River	101-75-015	146	(H)	08/23	ADF&G
Klahni River	101-75-050	40	(H)	08/21	ADF&G
Indian Creek	101-75-085	32	(H)	08/15	ADF&G
Clear Creek	101-75-30C	292	(H)	08/15	ADF&G
Gene's Lake Creek	101-75-30G	154	(F)	08/15	ADF&G
Kerr Creek	101-75-30K	26	(H)	08/15	ADF&G
Lake Creek	101-75-30L	60	(H)	08/15	ADF&G
Cripple Creek	101-75-30Q	1,068	(H)	08/10	ADF&G
Hatchery Creek	101-80-070	8	(F)	08/23	ADF&G
Crystal Creek	106-44-031	3,092	(W)		ADF&G
Aaron Creek	107-40-024	325	(A)	08/23	ADF&G
Harding River	107-40-049	70	(A)	08/23	ADF&G
Bradfield River:					
North Fork	107-40-052	685	(A)	08/23	ADF&G
East Fork	107-40-053	410	(A)	08/23	ADF&G
Eagle River	107-40-055	14	(A)	08/23	ADF&G
Stikine River:					
North Arm Creek	108-40-010	125	(F)	08/16	ADF&G
Kikahe River	108-40-016	23	(A)	08/11	ADF&G
Goat Creek	108-40-017	18	(A)	08/11	ADF&G
Andrew Creek	108-40-020	475	(H)	08/16	ADF&G

- Continued -

Table 26. (Page 2 of 2).

Stream Name	Stream Number	Total	Method	Date	Agency
Stikine River (continued):					
Blind Slough	108-40-040	1	(F)	09/08	ADF&G
Ohmer Creek	108-40-050	40	(A)	07/19	ADF&G
W. of Hot Springs	108-40-13A	167	(F)	08/16	ADF&G
Mt. Gallatin Creek	108-40-14E	2	(A)	08/11	ADF&G
Katete River	108-70-011	10	(A)	08/11	ADF&G
Fizzle Mt. Slough	108-70-055	5	(A)	08/11	ADF&G
Craig River	108-70-075	30	(A)	08/11	ADF&G
Tahltan River	108-80-100	4,384	(H)	08/12	ADF&G
Beatty Creek	108-80-115	593	(H)	08/05	ADF&G
Little Tahltan R.	108-80-120	7,292	(W)		CDFO ^b
Sashin Creek	109-10-006	4,188	(W)		NMFS ^c
Farragut River	110-14-007	103	(A)	08/17	ADF&G
Chuck River	110-32-009	8	(A)	08/17	ADF&G
King Salmon River	111-17-010	206	(W)		ADF&G
Taku River:					
Nakina River	111-32-220	4,500	(H)	08/04	ADF&G
Kowatua Creek	111-32-240	1,010	(H)	08/24	ADF&G
Little Tatsamenie Lk	111-32-254	762	(W)		CDFO
Tatsamenie River	111-32-255	1,272	(H)	08/24	ADF&G
Hackett River	111-32-260	515	(W)		CDFO
Nahlin River	111-32-270	1,535	(H)	07/24	ADF&G
Tseta Creek	111-32-275	66	(H)	08/04	ADF&G
Dudidontu River	111-32-280	243	(H)	08/04	ADF&G
Snettisham	111-33-	486	(W)		ADF&G
Auke Creek	111-50-042	43	(W)		NMFS
Chilkat River:					
Big Boulder Creek	115-32-054	86	(H)	08/14	ADF&G
Little Boulder Cr.	115-32-055	4	(F)	08/15	ADF&G
Stonehouse Creek	115-32-301	89	(H)	08/14	ADF&G
Alsek River:					
Klukshu River	182-30-020	225	(H)	08/01	ADF&G
Klukshu Lake	182-30-021	2,037	(W)		CDFO
Takhanne River	182-30-043	169	(H)	08/01	ADF&G
Goat Creek	182-30-045	54	(H)	08/01	ADF&G
Blanchard River	182-30-050	437	(H)	08/01	ADF&G
Akwe River	182-40-010	2	(A)	06/19	ADF&G
Situk River	182-70-010	885	(W)		ADF&G
Mountain Stream	182-70-025	5	(F)	09/06	ADF&G
Mountain Lake	182-70-030	6	(W)		ADF&G

^a ADF&G - Alaska Department of Fish and Game.^b CDFO - Canadian Department of Fisheries and Oceans.^c NMFS - National Marine Fisheries Service.

Table 27. Estimated total escapement of large (age-.3 or older) chinook salmon to Southeast Alaska and transboundary river natural runs, 1988.

System/ Tributary	Index Escapement	Tributary Expansion Factor ^a	Aerial Survey Expansion Factor	System Total Escapement	Category Expansion Factor	Total Escapement
Major Systems (3 Total)						
Alsek (Klukshu)	2,037	1/.64	1	3,183		
Taku (Nakina, Nahlin)	6,035	1/.60	1/.75	13,411		
Stikine (Little Tahltan)	7,292	1/.25	1	29,168		
Major Systems Subtotal:				45,762	1	45,762
Medium Systems (12 Total)						
Situk	885	1	1	885		
Chilkat/Big Boulder	175	1/.28	1/.8	781		
Andrews Creek	475	1	1/.625	760		
Behm Canal Systems						
Chickamin	786	1	1/.625	1,258		
Blossom	384	1	1/.625	614		
Keta	575	1	1/.625	920		
Unuk	1,818	1	1/.625	2,909		
Medium Systems Subtotal:				8,127	9/7	10,449
Minor Systems (22 Total)						
King Salmon	206	1	1	206		
Minor Systems Subtotal:				206	22/1	4,532
Total All Systems:	20,668			54,095		60,743

^a See Mecum (1990) for descriptions of the tributary expansion factors.

Table 28. Age composition of chinook salmon from escapements to Southeast Alaska and transboundary rivers, 1988.

System (Stream Number)			Brood Year and Age Class											
			1985		1984			1983			1982		1981	
			0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4
Wild Runs														
Carrol River	Total	N		8		8								16
101-45-078		%		50.0		50.0								100.0
Barrier Creek	Males	N				7		19			11			37
(Chickamin River)		%				10.8		29.2			16.9			56.9
101-71-04A	Females	N						7			20		1	28
		%						10.8			30.8		1.5	43.1
	Total	N				7		26			31		1	65
		%				10.8		40.0			47.7		1.5	100.0
Butler Creek	Males	N				5		25			4			34
(Chickamin River)		%				9.6		48.1			7.7			65.4
101-71-04B	Females	N						11			7			18
		%						21.2			13.5			34.6
	Total	N				5		36			11			52
		%				9.6		69.2			21.2			100.0
Clear Creek	Males	N									2			2
(Chickamin River)		%									28.6			28.6
101-71-04C	Females	N						1			3		1	5
		%						14.3			42.9		14.3	71.4
	Total	N						1			5		1	7
		%						14.3			71.4		14.3	100.0
Humpy Creek	Males	N			1			1						2
(Chickamin River)		%			20.0			20.0						40.0
101-71-04H	Females	N						2			1			3
		%						40.0			20.0			60.0
	Total	N			1			3			1			5
		%			20.0			60.0			20.0			100.0
Indian Creek	Males	N				2		6			2			10
(Chickamin River)		%				10.0		30.0			10.0			50.0
101-71-04I	Females	N						6			4			10
		%						30.0			20.0			50.0
	Total	N				2		12			6			20
		%				10.0		60.0			30.0			100.0
Leduc Creek	Males	N						2						2
(Chickamin River)		%						40.0						40.0
101-71-04L	Females	N						2			1			3
		%						40.0			20.0			60.0
	Total	N						4			1			5
		%						80.0			20.0			100.0
South Fork	Males	N				8		12			6			26
(Chickamin River)		%				20.5		30.8			15.4			66.7
101-71-04S	Females	N						6			7			13
		%						15.4			17.9			33.3
	Total	N				8		18			13			39
		%				20.5		46.2			33.3			100.0
Eulachon River	Males	N				2					1			3
(Unuk River)		%				12.5					6.3			18.8
101-75-015	Females	N						4			9			13
		%						25.0			56.3			81.3
	Total	N				2		4			10			16
		%				12.5		25.0			62.5			100.0

- Continued -

Table 28. (Page 2 of 3).

System (Stream Number)		Brood Year and Age Class												Total
		1985		1984		1983		1982		1981				
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4	
Clear Creek (Unuk River) 101-75-30C	Males	N		3		21			15		1			40
		%		4.2		29.2			20.8		1.4			55.6
	Females	N						12		20				32
		%						16.7		27.8				44.4
	Total	N		3		21			27		21			72
		%		4.2		29.2			37.5		29.2			100.0
Gene's Lake Creek (Unuk River) 101-75-30G	Males	N		2		19			1		1			23
		%		6.7		63.3			3.3		3.3			76.7
	Females	N						6.0		1.0				7
		%						20.0		3.3				23.3
	Total	N		2		19			7		2			30
		%		6.7		63.3			23.3		6.7			100.0
Cripple Creek (Unuk River) 101-75-30Q	Males	N		14		92			65		48		1	220
		%		3.4		22.1			15.6		11.5		0.2	52.8
	Females	N						39		156		2		197
		%						9.4		37.4		0.5		47.2
	Total	N		14		92			104		204		3	417
		%		3.4		22.1			24.9		48.9		0.7	100.0
Naha River 101-90-050	Males	N		1		4			1					6
		%		7.7		30.8			7.7					46.2
	Females	N			1				3		3			7
		%			7.7				23.1		23.1			53.8
	Total	N		1	1	4			4		3			13
		%		7.7	7.7	30.8			30.8		23.1			100.0
Little Tahltan R. 108-80-120 ^a	Males	N				4			18		126		3	151
		%				1.1			5.0		35.1		0.8	42.1
	Females	N				1			15		188	1	3	208
		%				0.3			4.2		52.4	0.3	0.8	57.9
	Total	N				5			33		314	1	6	359
		%				1.4			9.2		87.5	0.3	1.7	100.0
King Salmon R. 111-17-010	Males	N			1	2			2		8			13
		%			3.4	6.9			6.9		27.6			44.8
	Females	N									15		1	16
		%									51.7		3.4	55.2
	Total	N			1	2			2		23		1	29
		%			3.4	6.9			6.9		79.3		3.4	100.0
Taku River (Canyon Island) 111-32-032	Males	N		248		384	18		35	13	48	2		748
		%		25.2		38.9	1.8		3.5	1.3	4.9	0.2		75.9
	Females	N				85			36	4	107	1	1	235
		%				8.6			3.7	0.4	10.9	0.1	0.1	23.8
	Total	N		249		470	18		72	17	155	3	1	986
		%		25.3		47.7	1.8		7.3	1.7	15.7	0.3	0.1	100.0
Nakina River Carcass Weir 111-32-220	Males	N		1,025		3,947			762		1,247		35	7,016
		%		10.8		41.7			8.0		13.2		0.4	74.1
	Females	N							193		2,215		48	2,456
		%							2.0		23.4		0.5	25.9
	Total	N		1,025		3,947			955		3,462		83	9,472
		%		10.8		41.7			10.1		36.5		0.9	100.0
Tatsamenie River 111-32-255	Males	N		178		324			119		99		1	721
		%		18.3		33.3			12.2		10.2		0.1	74.1
	Females	N				1			71		178		2	252
		%				0.1			7.3		18.3		0.2	25.9
	Total	N		178		325			190		277		3	973
		%		18.3		33.4			19.5		28.5		0.3	100.0

- Continued -

Table 28. (Page 3 of 3).

System (Stream Number)		Brood Year and Age Class												Total	
		1985			1984			1983			1982		1981		
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4		
Nahlin River 111-32-270	Males	N		28		144		58		135		3		368	
		%		4.1		21.1		8.5		19.8		0.4		54.0	
	Females	N				3		53		254		2		312	
		%				0.4		7.8		37.3		0.3		45.8	
	Total	N		28		147		111		390		5		681	
		%		4.1		21.6		16.3		57.3		0.7		100.0	
Klukshu River Live Weir 182-30-020	Total	N				29		63	2	119	5			219	
		%				13.3		28.6	1.0	54.4	2.3			100.0	
Situk River 182-70-010	Males	N			3	2		1	3	9				18	
		%			4.9	3.3		1.6	4.9	14.8				29.5	
	Females	N			3			7	1		22			33	
		%			4.9			11.5	1.6		36.1			54.1	
	Total	N	2		6	3		12	2	3	35			61	
		%	3.3		9.8	4.9		19.7	3.3	4.9	57.4			100.0	
Number Males			1,499	4	4,968	18		1,142	16	1,748	2	43		9,440	
Percent			11.3	<0.1	37.4	0.1		8.6	0.1	13.2	<0.1	0.3		71.0	
Number Females				4	90		7	468	4	3,211	2	61	1	3,848	
Percent				<0.1	0.7		0.1	3.5	<0.1	24.2	<0.1	0.5	<0.1	29.0	
Total Number		2	1,508	8	5,097	18	12	1,674	22	5,083	9	104	1	13,537	
Total Percent		<0.1	11.1	0.1	37.7	0.1	0.1	12.4	0.2	37.5	0.1	0.8	<0.1	100.0	

Hatchery Runs

System (Stream Number)		Brood Year and Age Class									
		1986		1985		1984		1982		1981	
		0.1	0.2	1.1	0.3	1.2	1.3	1.4	1.5	Total	
Ketchikan Creek 101-47-025 Deer Mountain Hatchery	Total	N %		4 1.4	128 44.9	8 2.8	145 50.9				285 100.0
Crystal Creek 106-44-031	Males	N %			18 0.4		1,241 29.0	243 5.7	768 17.9	25 0.6	2,295 53.6
	Females	N %						222 5.2	1,741 40.6	26 0.6	1,989 46.4
	Total	N %			18 0.4		1,241 29.0	465 10.9	2,509 58.6	51 1.2	4,284 100.0
Sashin Creek 109-10-006 Little Port Walter	Total	N %	85 2.2	44 1.2	206 5.4		370 9.7	1,671 43.8	1,403 36.8	34 0.9	3,813 100.0
Snettisham Hatchery 111-33-	Males	N %					14 3.1	12 2.7	148 33.0	6 1.3	180 40.1
	Females	N %						3 0.7	260 57.9	6 1.3	269 59.9
	Total	N %					14 3.1	15 3.3	408 90.9	12 2.7	449 100.0
Medvejie Hatchery 113-37	Males	N %					7 6.9	19 18.8			26 25.7
	Females	N %					2 2.0	49 48.5	8 7.9		59 58.4
	Total	N %					10 9.9	77 76.2	14 13.9		101 100.0
Number Males					18		1,262	274	916	31	2,501
Percent					0.4		26.2	5.7	19.0	0.6	51.9
Number Females							2	274	2,009	32	2,317
Percent							<0.1	5.7	41.7	0.7	48.1
Total Number			85	48	352	8	1,780	2,228	4,334	97	8,932
Total Percent			1.0	0.5	3.9	0.1	19.9	24.9	48.5	1.1	100.0

* Courtesy Canadian Department of Fisheries and Oceans.

Table 29. Mean length-at-age (by sex) for chinook salmon from escapements to Southeast Alaska and transboundary rivers, 1988.

System (Stream Number)		Brood Year and Age Class												Total
		1985		1984			1983			1982		1981		
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4	
Wild Runs														
Carrol River 101-45-078	Total	Avg.	464		676									570
		S.E.	10.2		10.8									28.2
		N	8		8									16
Barrier Creek (Chickamin River) 101-71-04A	Males	Avg.			631		769		943					795
		S.E.			13.1		21.5		21.8					22.3
		N			7		19		11					37
	Females	Avg.					846		939		1060			920
		S.E.					20.4		10.9					13.0
		N					7		20		1			28
	Total	Avg.			631		789		941		1060			849
		S.E.			13.1		17.8		10.2					15.8
		N			7		26		31		1			65
Butler Creek (Chickamin River) 101-71-04B	Males	Avg.			627		807		928					795
		S.E.			27.9		15.8		46.8					19.0
		N			5		25		4					34
	Females	Avg.					838		885					857
		S.E.					22.9		23.2					17.1
		N					11		7					18
	Total	Avg.			627		817		901					816
		S.E.			27.9		13.1		22.0					14.3
		N			5		36		11					52
Clear Creek (Chickamin River) 101-71-04C	Males	Avg.							863					863
		S.E.							183.0					183.0
		N							2					2
	Females	Avg.					804		959		925			921
		S.E.							16.0					31.3
		N					1		3		1			5
	Total	Avg.					804		921		925			905
		S.E.							63.1					46.6
		N					1		5		1			7
Humpy Creek (Chickamin River) 101-71-04H	Males	Avg.			565		749							657
		S.E.												92.0
		N			1		1							2
	Females	Avg.					855		970					893
		S.E.					26.5							41.4
		N					2		1					3
	Total	Avg.			565		819		970					799
		S.E.					38.4							68.6
		N			1		3		1					5
Indian Creek (Chickamin River) 101-71-04I	Males	Avg.			610		760		1027					783
		S.E.			3.0		47.2		83.0					54.0
		N			2		6		2					10
	Females	Avg.					835		946					879
		S.E.					12.3		7.1					19.6
		N					6		4					10
	Total	Avg.			610		797		973					831
		S.E.			3.0		25.9		27.8					30.1
		N			2		12		6					20
Leduc Creek (Chickamin River) 101-71-04L	Males	Avg.					833							833
		S.E.					29.0							29.0
		N					2							2
	Females	Avg.					854		1012					907
		S.E.					41.0							57.7
		N					2		1					3
	Total	Avg.					844		1012					877
		S.E.					21.4							37.5
		N					4		1					5

- Continued -

Table 29. (Page 2 of 3).

System (Stream Number)		Brood Year and Age Class												Total
		1985		1984		1983			1982		1981			
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4	
South Fork (Chickamin River) 101-71-04S	Males	Avg.			604			735		968				748
		S.E.			10.7			28.4		30.3				30.4
		N			8			12		6				26
	Females	Avg.						869		919				896
		S.E.						13.4		24.7				15.8
		N						6		7				13
Total	Avg.			604			779		941				797	
	S.E.			10.7			24.5		19.8				23.6	
	N			8			18		13				39	
Eulachon River (Unuk River) 101-75-015	Males	Avg.			608					955				723
		S.E.			62.5									121.3
		N			2					1				3
	Females	Avg.						865		902				891
		S.E.						27.9		18.3				15.5
		N						4		9				13
Total	Avg.			608			865		908				859	
	S.E.			62.5			27.9		17.2				28.4	
	N			2			4		10				16	
Clear Creek (Unuk River) 101-75-30C	Males	Avg.		405		575		730		975				630
		S.E.				13.7		19.4						20.3
		N		3		21		15		1				40
	Females	Avg.						804		948				894
		S.E.						13.2		10.1				14.8
		N						12		20				32
Total	Avg.		405		575		763		949				748	
	S.E.				13.7		14.0		9.7				20.3	
	N		3		21		27		21				72	
Genes Lake Creek (Unuk River) 101-75-30G	Males	Avg.		425		557		750		890				568
		S.E.		60.0		12.4								21.8
		N		2		19		1		1				23
	Females	Avg.						822		770				814
		S.E.						13.2						13.4
		N						6		1				7
Total	Avg.		425		557		811		830				626	
	S.E.		60.0		12.4		15.1		60.0				25.6	
	N		2		19		7		2				30	
Cripple Creek (Unuk River) 101-75-30Q	Males	Avg.		370		603		794		958		1040		724
		S.E.		14.0		5.2		10.1		9.4				12.1
		N		14		92		65		48		1		220
	Females	Avg.						837		926		1010		909
		S.E.						5.5		3.4		40.0		3.9
		N						39		156		2		197
Total	Avg.		370		603		810		934		1020		812	
	S.E.		14.0		5.2		7.0		3.5		25.2		8.0	
	N		14		92		104		204		3		417	
Naha River 101-90-050	Males	Avg.		479		629		861						642
		S.E.				33.2								54.3
		N		1		4		1						6
	Females	Avg.			702			818		874				825
		S.E.						31.6		11.6				26.4
		N			1			3		3				7
Total	Avg.		479	702	629		829		874				741	
	S.E.				33.2		24.8		11.6				38.1	
	N		1	1	4		4		3				13	
King Salmon River 111-17-010	Males	Avg.			795	640		848		895				841
		S.E.				40.0		47.5		17.3				29.0
		N			1	2		2		8				13
	Females	Avg.								885		970		890
		S.E.								10.3				11.0
		N								15		1		16
Total	Avg.			795	640		848		888		970		868	
	S.E.				40.0		47.5		8.8				14.8	
	N			1	2		2		23		1		29	

- Continued -

Table 29. (Page 3 of 3).

System (Stream Number)		Brood Year and Age Class												Total
		1985		1984			1983			1982		1981		
		0.2	1.1	0.3	1.2	2.1	0.4	1.3	2.2	1.4	2.3	1.5	2.4	
Taku River (Canyon Is.) 111-32-032	Males	Avg.	356		548	383		696	569	860	743			508
		S.E.	2.6		3.2	8.6		12.4	19.2	10.3	62.5			5.5
		N	247		378	18		35	13	46	2			731
	Females	Avg.			582			719	588	844	820	835	890	716
		S.E.			5.5			11.7	21.7	5.3				9.1
		N			85			36	4	107	1	1	1	242
	Total	Avg.	356		554	383		707	574	849	768	835	890	560
		S.E.	2.6		2.8	8.6		8.6	15.3	4.8	44.4			5.5
		N	247		463	18		71	17	153	3	1	1	974
Tatsamenie River 111-032-255	Males	Avg.	365		575			738		915		896		597
		S.E.	3.5		3.5			6.6		5.7				6.9
		N	178		324			119		98		1		719
	Females	Avg.			704			791		872		805		846
		S.E.						5.4		3.0		23.0		3.9
		N			1			71		178		2		253
	Total	Avg.	365		576			758		887		835		662
		S.E.	3.5		3.5			5.0		3.1		33.1		6.3
		N	178		325			190		276		3		972
Nahlin River 111-32-270	Males	Avg.	378		586			742		884		949		707
		S.E.	10.0		5.2			8.7		5.1		55.2		9.0
		N	28		144			58		135		3		368
	Females	Avg.			645			768		837		869		824
		S.E.			52.0			5.6		2.9		9.0		3.2
		N			3			53		254		2		312
	Total	Avg.	378		588			754		853		917		761
		S.E.	10.0		5.2			5.4		2.8		36.1		5.5
		N	28		147			111		390		5		681
Situk River 182-70-010	Males	Avg.		780	735			720	620	861				786
		S.E.		35.1	15.0				64.3	17.0				25.3
		N		3	2			1	3	9				18
	Females	Avg.		820			881	900		871				870
		S.E.		10.0			14.5			7.1				6.3
		N		3			7	1		22				33
	Total	Avg.	577		800	703		892	810	620	867			834
		S.E.	53.5		18.6	32.8		18.5	90.0	64.3	6.9			12.3
		N	2		6	3		12	2	3	34			62

Hatchery Runs

System (Stream Number)		Brood Year and Age Class					Total
		1984		1983		1981	
		1.2	1.3	1.4	1.5		
Snettisham Hatchery 111-33	Males	Avg.	559	709	850	906	820
		S.E.	17.0	19.9	6.2	30.4	8.5
		N	14	11	144	6	175
	Females	Avg.		800	834	946	836
		S.E.		42.5	2.8	19.0	2.9
		N		3	257	6	266
	Total	Avg.	559	728	840	926	830
		S.E.	17.0	20.2	2.9	18.1	3.8
		N	14	14	401	12	441
Medvejie Hatchery 113-37	Males	Avg.	675	756			734
		S.E.	26.3	14.9			14.6
		N	7	19			26
	Females	Avg.	665	804	699		785
		S.E.	85.0	8.8	34.4		10.4
		N	2	49	8		59
	Total	Avg.	673	791	699		769
		S.E.	24.7	8.0	34.4		8.8
		N	9	68	8		85

Table 30. Southeast Alaska commercial troll, seine, and gillnet harvest of chinook salmon freshwater aged 0., 1988.

		Area				Total
		Northern Outside	Southern Outside	Northern Inside	Southern Inside	
Winter Troll	Number	12,774	1,055	8,749	3,817	26,395
	Percent	69.6	62.8	31.9	44.0	47.0
Summer Troll	Number	86,739	20,425	12,296	4,837	124,297
	Percent	83.2	72.6	48.4	37.1	72.8
Seine	Number		9,106	295	269	9,670
	Percent		90.1	40.0	64.7	85.8
Gillnet	Number			226	236	462
	Percent			18.0	9.0	8.2

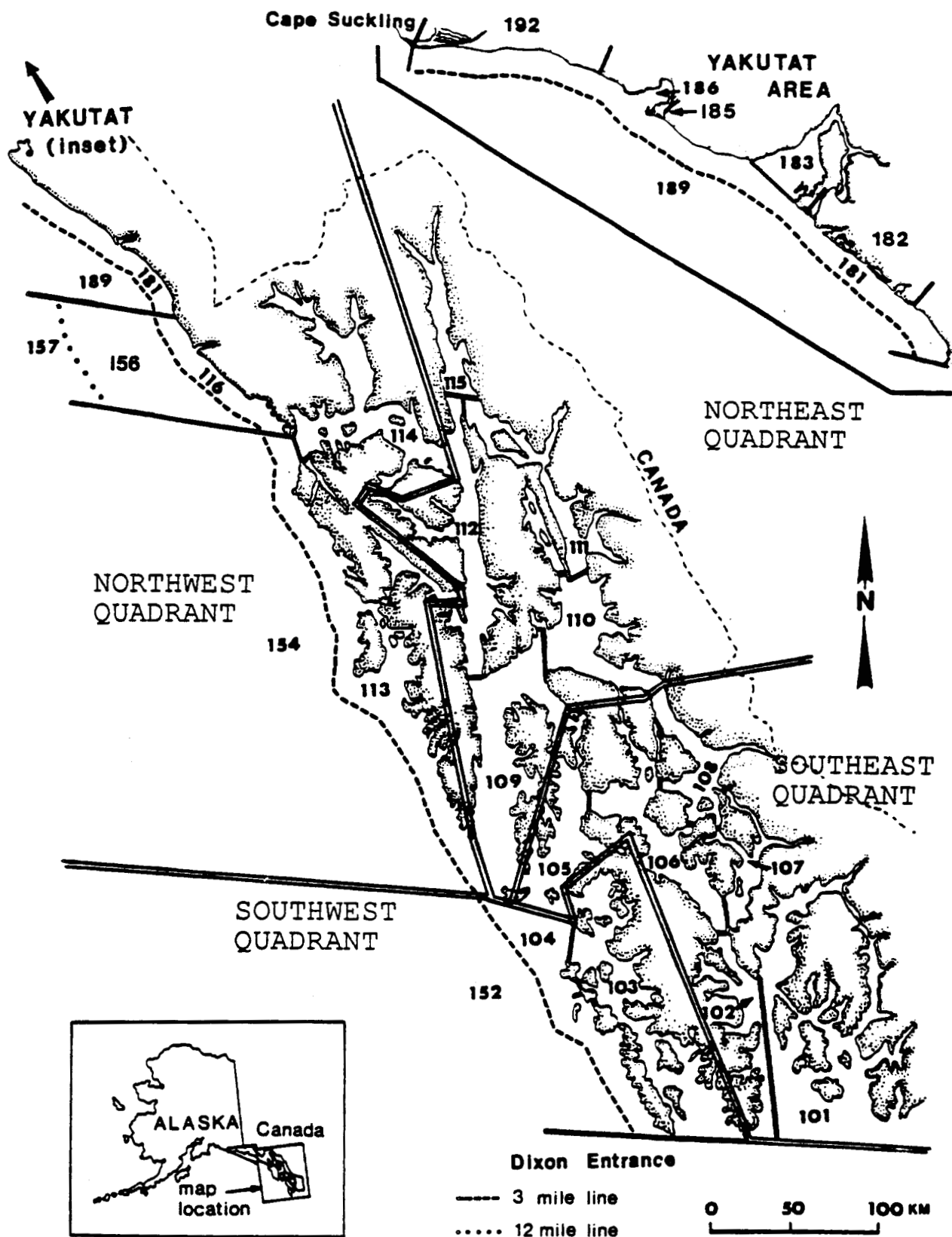


Figure 1. Map of Southeast Alaska showing the statistical fishing districts and the four quadrants used for analysis of the troll data, 1988.

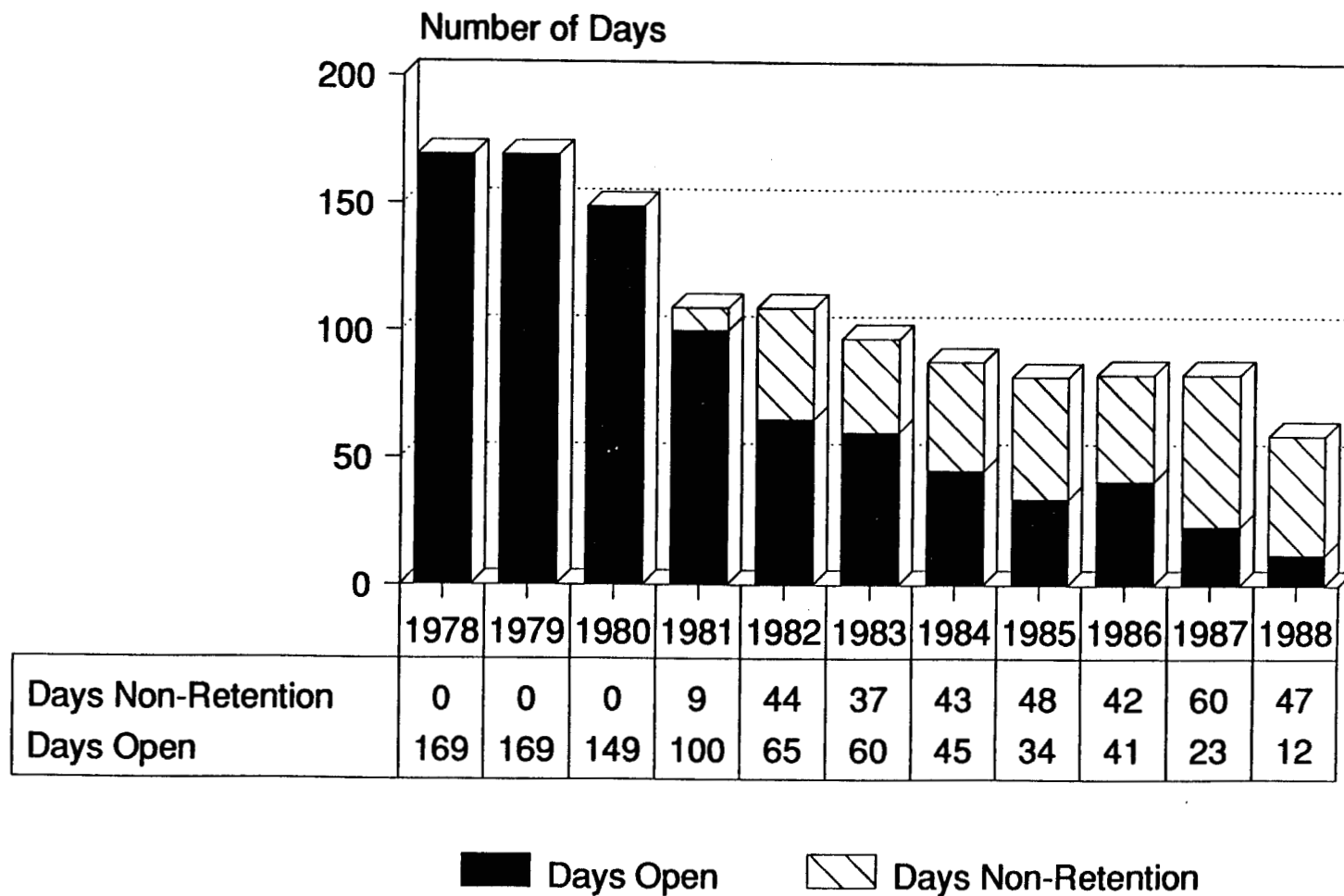


Figure 2. Number of days open for chinook salmon fishing and days of non-retention of chinook salmon in Southeast Alaska summer troll seasons, 1978 to 1988.

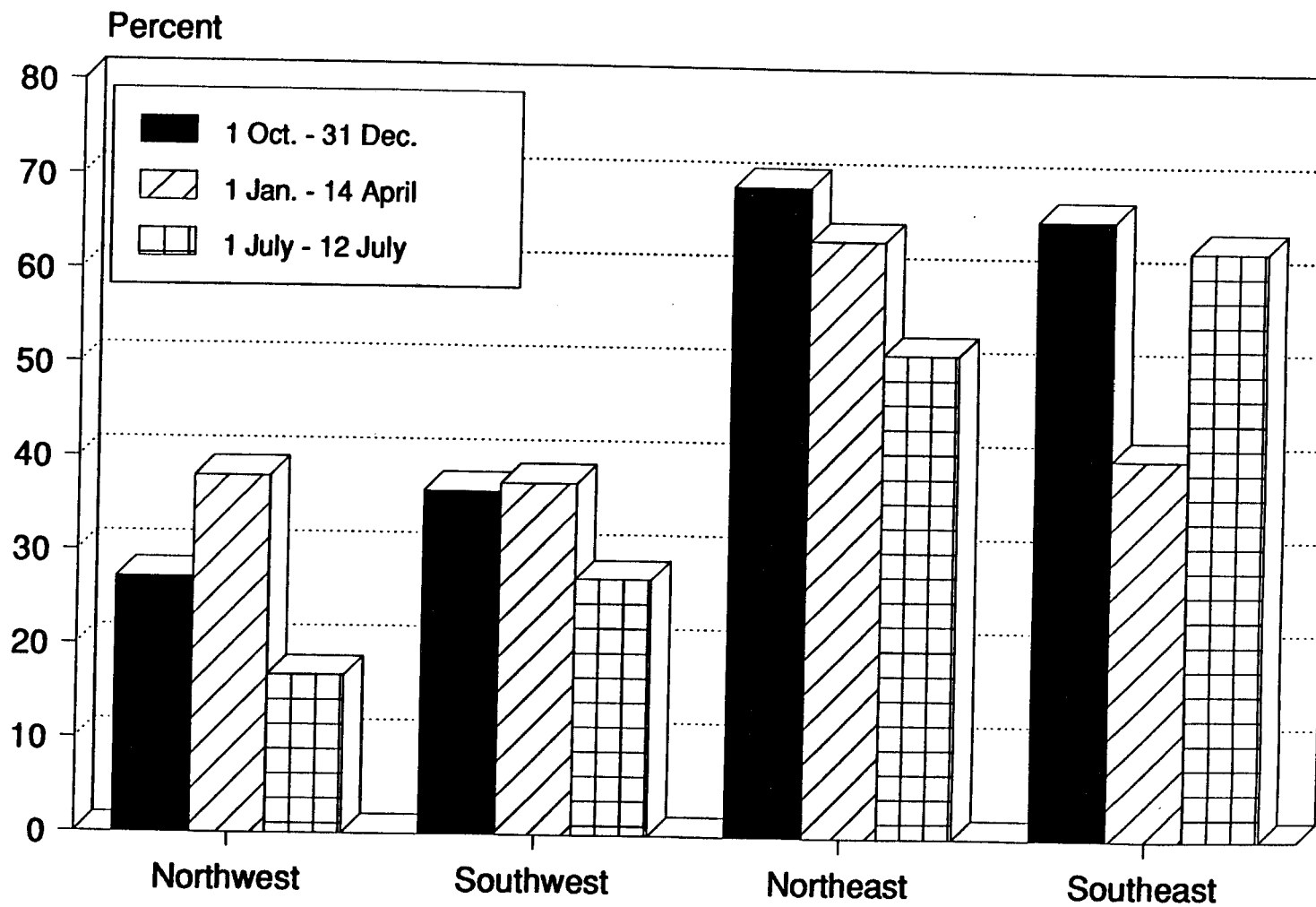


Figure 3. Percentage of age-1. chinook salmon in the Southeast Alaska troll harvest by quadrant, 1 October 1987-12 July 1988.

APPENDIX A

**POUNDS, AVERAGE WEIGHT,
NUMBER OF BOATS, CATCH PER BOAT**

Appendix A.1. Sample size required for approximate 90% or 95% simultaneous confidence intervals with precision $\pm 5\%$ for age compositions.

Population Size ^a	Number of Age Classes					
	90% Confidence			95% Confidence		
	2	3	4+	2	3	4+
500	176	218	224	218	251	253
1000	214	278	288	278	335	338
1500	230	306	318	306	377	381
2000	239	323	336	323	402	407
2500	245	334	347	334	419	424
3000	249	341	356	341	431	436
3500	252	347	362	347	440	445
4000	254	351	366	351	447	452
4500	256	355	370	355	453	458
5000	257	357	373	357	457	463
6000	259	362	378	362	464	470
7000	261	365	381	365	469	475
8000	262	367	384	367	473	479
9000	263	369	386	369	476	483
10000	264	370	388	370	479	485
15000	266	375	393	375	487	493
20000	267	377	395	377	491	497
25000	268	379	397	379	493	500
30000	269	380	398	380	495	501
35000	269	380	398	380	496	503
40000	269	381	399	381	497	504
45000	269	381	399	381	497	504
50000	270	382	400	382	498	505
60000	270	382	400	382	499	506
70000	270	383	401	383	499	506
80000	270	383	401	383	500	507
90000	270	383	401	383	500	507
100000	270	383	401	383	500	507
Infinite	271	385	403	385	503	510

^a Sample sizes for infinite population size computed from $n_0 = (c/d)^2$, where d is the precision ($= .05$, here) and $c = Z_{\alpha/2v} [(1/m)(1-1/m)]^{.5}$; for 2 classes, $v = 1$ and $m = 2$; for 3 classes, $v = 2$ and $m = 2$; for 4+ classes, $v = 3$ and $m = 3$ (Angers 1989; see also Thompson 1987). Sample sizes for finite population sizes are computed from $n = n_0 / [1 + (n_0 - 1)/N]$, where N is the finite population size (Cochran 1977).

— 68 —

- Continued -

Appendix A.2. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total		
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total	
1987	40	09/27-10/03				0	14,677										14,677	21,529	
	41	10/04-10/10	357	92		449	48,798								46		48,844	162,268	
	42	10/11-10/17	841	580		1,421	36,155							10		36,165	110,796		
	43	10/18-10/24	353			353	20,431										20,431	93,103	
	44	10/25-10/31	343	195		538	21,232								17		21,249	65,437	
	45	11/01-11/07	539			539	22,863										22,863	38,526	
	46	11/08-11/14	173			173	5,163										5,163	22,609	
	47	11/15-11/21	948	95		1,043	6,223										6,223	18,431	
	48	11/22-11/28	129			129	4,983									49	5,032	8,714	
	49	11/29-12/05	661			661	5,312										5,312	8,635	
	50	12/06-12/12	140			140	3,348											3,348	5,035
	51	12/13-12/19	1,294			1,294	4,023											4,023	6,670
	52	12/20-12/26	50			50	728											728	1,090
53	12/27-12/31	585			585	2,125											2,125	3,423	
1988	1	01/01-01/02				0	3,422										3,422	3,883	
	2	01/03-01/09	1,532			1,532	16,175										16,175	19,616	
	3	01/10-01/16	629	228		857	6,482										6,482	9,280	
	4	01/17-01/23	456			456	1,645										1,645	4,043	
	5	01/24-01/30	569	487		1,056	8,484										8,484	11,188	
	6	01/31-02/06	147			147	6,765										6,765	7,980	
	7	02/07-02/13	640			640	3,191								22		3,213	7,426	
	8	02/14-02/20	162	102		264	1,213								89		1,302	2,793	
	9	02/21-02/27	1,112	61		1,173	2,410								61		2,471	5,785	
	10	02/28-03/05	1,978			1,978	4,466								13		4,479	10,759	
	11	03/06-03/12	232	119		351	6,570										6,570	13,679	
	12	03/13-03/19	1,434			1,434	9,043										9,043	24,254	
	13	03/20-03/26	173			173	5,942										5,942	19,827	
	14	03/27-04/02	626			626	4,241		432						99		4,772	38,052	
	15	04/03-04/09	2,547			2,547	7,522		190						43		7,755	23,273	
	16	04/10-04/16	783	202		985	12,011								172		12,183	44,642	
Winter Totals			19,433	2,161	0	21,594	295,643	0	622	0	0	0	0	0	621	0	296,886	812,746	
	23	05/29-06/04				0											0	407	
	24	06/05-06/11				0	159										159	39,151	
	25	06/12-06/18				0		1,690									1,690	26,241	
	26	06/19-06/25				0	719	868									1,587	24,607	
	27	06/26-07/02	4,256	91,575		95,831	117,765	9,909						664	200		128,538	294,102	
	28	07/03-07/09	23,107	231,996		255,103	830,791	48,451	46,413	3,386	10,664	14,965	52,923	520	3,453	10,897	1,022,463	1,524,534	
	29	07/10-07/16	13,204	104,297	3,379	120,880	538,575	26,684	41,199	3,010	61,387	44,559	196,174	19,458	2,591	64,267	997,904	1,267,765	
Summer Totals			40,567	427,868	3,379	471,814	1,488,009	87,602	87,612	6,396	72,051	59,524	249,097	20,642	6,244	75,164	2,152,341	3,176,807	
Season Totals			60,000	430,029	3,379	493,408	1,783,652	177,658	88,234	6,396	72,051	59,524	249,097	20,642	6,865	75,164	2,449,227	3,989,553	

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.3. Power troll harvest in pounds of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant					
			101	102	105	106	107	108	Total	109	110	111	112	114	Total
1987	40	09/27-10/03		239			1,027	278	1,544		1,328			478	1,806
	41	10/04-10/10	2,675	2,710	62	4,107	3,243	1,274	14,071	20,255	44,652	5,923	1,282	12,181	84,293
	42	10/11-10/17	2,543	1,972	400	4,648	265	2,345	12,173	6,900	26,387	4,317	791	8,594	46,989
	43	10/18-10/24	1,925	91		4,155	461	1,155	7,787	16,169	29,389	283	640	8,531	55,012
	44	10/25-10/31	469	909		317	223	227	2,145	14,465	12,616	1,238		5,185	33,504
	45	11/01-11/07	482	117		1,477	12	1,664	3,752	2,094	708	691		4,157	7,650
	46	11/08-11/14	321	220		834	314	852	2,541	2,979	1,533		27	6,086	10,625
	47	11/15-11/21	134	352				393	879	2,297	109			5,382	7,788
	48	11/22-11/28	237					565	802			295		1,649	1,944
	49	11/29-12/05	214			204	240	470	1,128	112				73	185
	50	12/06-12/12	14			30	217	40	301			143		164	307
	51	12/13-12/19	306					34	340	328				317	645
	52	12/20-12/26	176						176		40			64	104
	53	12/27-12/31				275		58	333						0
1988	1	01/01-01/02		27		242		143	412						0
	2	01/03-01/09	11	308		180	79	258	836	52				354	406
	3	01/10-01/16	13	403		129		177	722	1,016					1,016
	4	01/17-01/23	76			52	71	108	307		16		22	231	269
	5	01/24-01/30	52	223	433		98	73	879					102	102
	6	01/31-02/06	19	226		112			357	193				22	215
	7	02/07-02/13	99	227	21	440	380	173	1,340	1,411	42			129	1,582
	8	02/14-02/20	212	25		32			269	260		203			463
	9	02/21-02/27	295	275		221	15		806	260	110			185	555
	10	02/28-03/05	451	338	355	482	46	124	1,796	562	392			166	1,120
	11	03/06-03/12	137		1,167	18		45	1,367	1,313	1,654	270	43	589	3,869
	12	03/13-03/19	144	1,534	716	522	12	41	2,969	5,096	2,006	9		640	7,751
	13	03/20-03/26	316	428	2,435	1,405			4,584	2,133	1,593		56	2,959	6,741
	14	03/27-04/02	714	2,105	697	1,980			5,496	10,741	7,812			4,903	23,456
	15	04/03-04/09	933	1,034	319	207	558	9	3,060	2,605	3,085			1,673	7,363
	16	04/10-04/16	902	2,390	2,018	998	712	1,550	8,570	6,067	8,829		83	3,833	18,812
Winter Totals			13,870	16,153	8,623	23,067	7,973	12,056	81,742	97,308	142,301	13,372	2,944	68,647	324,572
23	05/29-06/04	47						47							0
24	06/05-06/11	4,423	3,253					7,676	8,603	13,573				22,176	
25	06/12-06/18	5,059	5,699		72			10,830	2,747	3,816				6,563	
26	06/19-06/25	2,210	803		609			3,622	10,116	2,497				12,613	
27	06/26-07/02	2,040	769	3,322	1,430			7,561	27,314	3,074	285			30,673	
28	07/03-07/09	4,517	19,983	11,861	23,451	1,449		61,261	91,281	13,676		10,265		115,222	
29	07/10-07/16	3,106	9,016	14,637	12,427			39,186	49,999	14,898		4,220		69,117	
Summer Totals			21,402	39,523	29,820	37,989	1,449	0	130,183	190,060	51,534	285	14,485	0	256,364
Season Totals			35,272	55,676	38,443	61,056	9,422	12,056	211,925	287,368	193,835	13,657	17,429	a	580,936

- Continued -

Appendix A.3. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03				0	10,886											
	41	10/04-10/10	357	92		449	45,726										10,886	14,236
	42	10/11-10/17	841			841	33,968										45,726	144,539
	43	10/18-10/24	353			353	18,886										33,968	93,971
	44	10/25-10/31	343	195		538	19,747										18,886	82,038
	45	11/01-11/07	431			431	22,439										19,747	55,934
	46	11/08-11/14	173			173	4,865										22,439	34,272
	47	11/15-11/21	759	95		854	6,071										4,865	18,204
	48	11/22-11/28	129			129	4,444										6,071	15,592
	49	11/29-12/05	661			661	4,736							49			4,493	7,368
	50	12/06-12/12	55			55	3,144										4,736	6,710
	51	12/13-12/19	589			589	3,456										3,144	3,807
	52	12/20-12/26	50			50	689										3,456	5,030
	53	12/27-12/31	585			585	1,664										689	1,019
1988	1	01/01-01/02				0	3,422										1,664	2,582
	2	01/03-01/09	900			900	15,520										3,422	3,834
	3	01/10-01/16	618	228		846	5,693										15,520	17,662
	4	01/17-01/23	423			423	1,369										5,693	8,277
	5	01/24-01/30	569	487		1,056	7,583										1,369	2,368
	6	01/31-02/06	127			127	6,100										7,583	9,620
	7	02/07-02/13	616			616	2,591										6,100	6,799
	8	02/14-02/20	162	102		264	1,169							22			2,613	6,151
	9	02/21-02/27	1,068	61		1,129	2,391										1,169	2,165
	10	02/28-03/05	1,847			1,847	4,125										2,391	4,881
	11	03/06-03/12	223	119		342	6,119										4,125	8,888
	12	03/13-03/19	1,426			1,426	8,907										6,119	11,697
	13	03/20-03/26	173			173	5,768										8,907	21,053
	14	03/27-04/02	379			379	3,951			432							5,768	17,266
	15	04/03-04/09	2,429			2,429	7,313			190							4,383	33,714
	16	04/10-04/16	700	202		902	11,350										7,503	20,355
Winter Totals			16,986	1,581	0	18,567	274,092	0	622	0	0	0	0	0	71	0	274,785	699,666
	23	05/29-06/04				0											0	47
	24	06/05-06/11				0	140										140	29,992
	25	06/12-06/18				0		1,674									1,674	19,067
	26	06/19-06/25				0	517	868									1,385	17,620
	27	06/26-07/02	996	78,668		79,664	95,974	2,064									98,038	215,936
	28	07/03-07/09	14,345	200,704		215,049	772,934	31,115	45,061	3,386	10,664	14,965	52,115			10,166	940,406	1,331,938
	29	07/10-07/16	6,553	92,791	3,344	102,688	510,536	18,686	41,199	3,010	60,503	44,559	190,777	19,121	743	64,267	953,401	1,164,392
Summer Totals			21,894	372,163	3,344	397,401	1,380,101	54,407	86,260	6,396	71,167	59,524	242,892	19,121	743	74,433	1,995,044	2,778,992
Season Totals			38,880	373,744	3,344	415,968	1,654,193	123,054	86,882	6,396	71,167	59,524	242,892	19,121	814	74,433	2,269,829	3,478,658

* District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

- 72 -

- Continued -

Appendix A.4. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant								Grand Total	
			103	104	152	Total	113	114	116	154	157	181	183	189		Total
1987	40	09/27-10/03				0	3,791								3,791	7,293
	41	10/04-10/10				0	3,072					46			3,118	17,729
	42	10/11-10/17		580		580	2,187					10			2,197	16,825
	43	10/18-10/24				0	1,545								1,545	11,065
	44	10/25-10/31				0	1,485					17			1,502	9,503
	45	11/01-11/07	108			108	424								424	4,254
	46	11/08-11/14				0	298								298	4,405
	47	11/15-11/21	189			189	152								152	2,839
	48	11/22-11/28				0	539								539	1,346
	49	11/29-12/05				0	576								576	1,925
	50	12/06-12/12	85			85	204								204	1,228
	51	12/13-12/19	705			705	567								567	1,640
	52	12/20-12/26				0	39								39	71
	53	12/27-12/31				0	461								461	841
1988	1	01/01-01/02				0									0	49
	2	01/03-01/09	632			632	655								655	1,954
	3	01/10-01/16	11			11	789								789	1,003
	4	01/17-01/23	33			33	276								276	1,675
	5	01/24-01/30				0	901								901	1,568
	6	01/31-02/06	20			20	665								665	1,181
	7	02/07-02/13	24			24	600								600	1,275
	8	02/14-02/20				0	44					89			133	628
	9	02/21-02/27	44			44	19					61			80	904
	10	02/28-03/05	131			131	341					13			354	1,871
	11	03/06-03/12	9			9	451								451	1,982
	12	03/13-03/19	8			8	136								136	3,201
	13	03/20-03/26				0	174								174	2,561
	14	03/27-04/02	247			247	290					99			389	4,338
	15	04/03-04/09	118			118	209					43			252	2,918
	16	04/10-04/16	83			83	661					172			833	5,008
Winter Totals			2,447	580	0	3,027	21,551	0	0	0	0	0	550	0	22,101	113,080
	23	05/29-06/04				0									0	360
	24	06/05-06/11				0	19								19	9,159
	25	06/12-06/18				0		16							16	7,174
	26	06/19-06/25				0	202								202	6,987
	27	06/26-07/02	3,260	12,907		16,167	21,791	7,845				664	200		30,500	78,166
	28	07/03-07/09	8,762	31,292		40,054	57,857	17,336	1,352		808	520	3,453	731	82,057	192,596
	29	07/10-07/16	6,651	11,506	35	18,192	28,039	7,998		884	5,397	337	1,848		44,503	103,373
Summer Totals			18,673	55,705	35	74,413	107,908	33,195	1,352	884	6,205	1,521	5,501	731	157,297	397,815
Season Totals			21,120	56,285	35	77,440	129,459	54,604	1,352	884	6,205	1,521	6,051	731	179,398	510,895

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.5. Average weight (lb) of chinook salmon harvested in Southeast Alaska by combined hand and power troll gear by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03		10.0		11.6	10.6	12.4	11.2	17.8	14.3		15.0	11.6		13.5
	41	10/04-10/10	11.2	10.4	12.4	12.5	13.1	12.2	11.9	14.2	13.5	14.5	14.6	12.9		13.7
	42	10/11-10/17	12.1	10.9	14.8	14.0	13.7	12.3	12.8	14.9	13.8	17.2	13.2	13.3		14.0
	43	10/18-10/24	12.5	10.1		13.1	12.4	11.5	12.6	14.6	13.6	16.6	13.4	13.1		13.8
	44	10/25-10/31	11.7	11.8	13.8	13.3	14.2	13.2	12.7	14.7	14.1	12.4		12.5		13.9
	45	11/01-11/07	12.6	8.6		11.5	12.6	12.5	11.8	15.2	13.0	15.4	18.0	13.6		14.0
	46	11/08-11/14	12.6	12.9		15.1	12.0	13.2	13.4	14.0	13.3		10.4	13.1		13.3
	47	11/15-11/21	10.1	11.2		13.5	11.5	13.9	12.4	13.9	13.5			11.7		12.3
	48	11/22-11/28	10.6	13.7			11.5	11.7	11.5	19.1		17.4		13.9		14.5
	49	11/29-12/05	11.3		8.0	14.8	12.9	12.8	12.8	13.2				14.4		13.9
	50	12/06-12/12	14.0			13.7	11.9	11.3	12.2	15.2		15.9		14.7		15.1
	51	12/13-12/19	12.8	11.5		11.8		17.0	12.8	14.3	19.3			11.6		12.7
	52	12/20-12/26	13.5	10.0				22.0	13.9		13.3			12.8		13.0
	53	12/27-12/31				13.7		15.8	14.5	10.3						10.3
1988	1	01/01-01/02		13.5		17.3		12.8	14.9							
	2	01/03-01/09	11.0	11.0		17.4	13.1	12.4	13.1	13.9				16.2		15.7
	3	01/10-01/16	6.5	10.3		12.0		11.6	10.9	12.0				15.0	14.0	12.1
	4	01/17-01/23	9.5			11.1	11.8	11.6	11.1	14.6	8.0		22.0	16.7		15.8
	5	01/24-01/30	13.0	10.1	13.5	15.4	12.3	10.6	12.3	19.0	20.0			18.5		18.8
	6	01/31-02/06	9.5	10.8		14.5			12.2	15.3				16.7		16.0
	7	02/07-02/13	10.3	10.5	21.0	11.9	13.8	11.6	11.9	13.1	21.0			17.5		14.2
	8	02/14-02/20	11.8	8.3		13.6	15.3	10.4	12.2	11.8	34.5	20.3		17.0		15.8
	9	02/21-02/27	10.5	11.0		13.2	15.0	18.0	11.8	14.3	13.8			15.9		15.2
	10	02/28-03/05	12.7	11.3	11.1	13.8	12.7	12.9	12.5	14.8	16.3		27.0	14.7		15.3
	11	03/06-03/12	13.7		13.4	14.0	12.9	13.5	13.5	15.0	13.9	15.0	10.8	16.4		14.8
	12	03/13-03/19	13.1	12.6	12.7	12.9	12.7	16.2	12.9	16.6	13.5	9.0		15.4		15.6
	13	03/20-03/26	11.2	11.6	13.8	13.4	13.3	15.0	13.3	16.9	13.2		11.2	15.0		15.0
	14	03/27-04/02	11.8	18.1	13.9	13.6	8.0	13.2	14.5	16.3	14.0			15.3		15.3
	15	04/03-04/09	12.0	11.9	13.9	11.8	11.4	14.6	12.2	14.1	14.0			16.5		14.6
	16	04/10-04/16	12.2	13.1	13.8	14.4	14.2	12.8	13.4	15.0	13.7		13.8	16.0		14.6
Winter Totals			11.9	11.9	13.6	13.3	12.8	12.6	12.7	14.8	13.7	15.3	14.1	13.5	14.0	14.0
23			05/29-06/04	14.5					14.5							
24			06/05-06/11	15.2	15.3		18.3		15.6	13.1	12.3					12.6
25			06/12-06/18	16.5	16.2		19.6		16.8	15.2	12.9					13.7
26			06/19-06/25	16.3	14.5		20.5		17.8	17.5	12.9					16.3
27			06/26-07/02	13.5	13.8	14.0	19.0	13.0	16.2	16.3	12.5	9.8	12.2			14.9
28			07/03-07/09	12.8	11.7	15.3	12.3	14.5	18.1	12.7	15.7	12.4	12.2	13.3		14.7
29			07/10-07/16	14.3	14.9	14.2	12.9	16.5	18.8	13.9	16.1	12.0	14.8	12.8		14.5
Summer Totals			14.6	13.2	14.6	14.0	14.4	18.4	14.0	15.8	12.3	11.3	13.0			14.6
Season Totals			13.6	12.8	14.4	13.7	13.1	12.6	13.5	15.5	13.2	15.0	13.3	^a	14.0	14.3

- Continued -

Appendix A.5. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03					14.1											
	41	10/04-10/10	10.5	13.1		11.0	14.1										14.1	13.6
	42	10/11-10/17	11.2	12.1		11.6	14.2									11.5	14.1	13.6
	43	10/18-10/24	14.7			14.7	14.8									10.0	14.2	13.8
	44	10/25-10/31	13.2	21.7		15.4	15.6										14.8	13.9
	45	11/01-11/07	11.5			11.5	16.8									8.5	15.6	14.3
	46	11/08-11/14	13.3			13.3	15.7										16.8	15.0
	47	11/15-11/21	12.8	10.6		12.6	17.3										15.7	13.8
	48	11/22-11/28	12.9			12.9	17.8										17.3	13.6
	49	11/29-12/05	12.5			12.5	19.4									24.5	17.8	15.6
	50	12/06-12/12	12.7			12.7	18.5										19.4	16.3
	51	12/13-12/19	13.5			13.5	18.2										18.5	16.5
	52	12/20-12/26	12.5			12.5	17.8										18.2	15.8
	53	12/27-12/31	11.9			11.9	16.2										17.8	16.0
1988	1	01/01-01/02					17.4										16.2	14.9
	2	01/03-01/09	14.7			14.7	17.4										17.4	17.0
	3	01/10-01/16	11.6	14.3		12.2	17.1										17.4	16.8
	4	01/17-01/23	12.0			12.0	16.6										17.1	15.0
	5	01/24-01/30	12.4	13.2		12.7	19.9										16.6	14.5
	6	01/31-02/06	16.3			16.3	18.4										19.9	17.9
	7	02/07-02/13	10.3			10.3	18.4										18.4	17.7
	8	02/14-02/20	18.0	12.8		15.5	19.9									11.0	18.4	14.6
	9	02/21-02/27	12.9	12.2		12.9	21.1									11.1	18.9	16.0
	10	02/28-03/05	12.8			12.8	21.0									12.2	20.8	15.6
	11	03/06-03/12	9.3	11.9		10.0	20.6									13.0	20.9	15.8
	12	03/13-03/19	12.2			12.2	18.0										20.6	16.5
	13	03/20-03/26	17.3			17.3	19.0										18.0	15.5
	14	03/27-04/02	14.9			14.9	20.8		13.1							11.0	19.0	15.4
	15	04/03-04/09	14.2			14.2	19.7		14.6							10.8	19.4	15.5
	16	04/10-04/16	13.5	10.1		12.6	20.1									14.3	19.4	15.3
Winter Totals			12.9	12.8		12.9	16.2		13.5							12.4	16.2	14.5
	23	05/29-06/04																14.5
	24	06/05-06/11					13.3										13.3	13.5
	25	06/12-06/18						14.6									14.6	15.6
	26	06/19-06/25					14.1	15.5									14.8	16.7
	27	06/26-07/02	17.5	16.6		16.6	20.3	13.8						15.1	15.4		19.6	17.4
	28	07/03-07/09	15.7	16.4		16.3	21.2	16.9	21.3	16.1	24.7	18.9	21.9	13.7	16.2	24.5	21.0	18.6
	29	07/10-07/16	16.7	18.1	19.8	18.0	21.1	15.3	18.7	24.1	22.7	19.6	21.4	21.4	15.2	16.9	20.5	19.3
Summer Totals			16.2	16.8	19.8	16.8	21.1	15.9	20.0	19.1	22.9	19.4	21.5	20.8	15.7	17.7	20.7	18.6
Season Totals			15.0	16.8	19.8	16.6	20.1	14.6	19.9	19.1	22.9	19.4	21.5	20.8	15.4	17.7	20.0	17.6

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.6. Average weight (lb) of chinook salmon harvested in Southeast Alaska by power troll gear by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant					
			101	102	105	106	107	108	Total	109	110	111	112	114	Total
1987	40	09/27-10/03		10.0			10.6	13.2	10.9		14.3			13.3	14.0
	41	10/04-10/10	11.2	10.4	12.4	12.6	13.1	12.0	11.9	14.2	13.4	14.5	13.9	13.1	13.6
	42	10/11-10/17	12.3	10.8	14.8	14.0	12.0	12.3	12.7	14.6	13.8	17.2	15.2	13.5	14.2
	43	10/18-10/24	12.3	10.1		13.0	14.0	11.6	12.6	14.5	13.5	16.6	13.9	13.2	13.8
	44	10/25-10/31	11.7	11.8		12.7	13.9	15.1	12.4	14.5	13.9	12.4		12.1	13.8
	45	11/01-11/07	13.0	5.1		11.0	12.0	12.6	11.5	15.1	12.6	15.4		14.0	14.3
	46	11/08-11/14	12.8	12.9		15.2	10.8	13.1	13.3	13.8	13.3		13.5	13.1	13.3
	47	11/15-11/21	9.6	11.0				15.1	12.2	13.9	13.6			11.4	12.1
	48	11/22-11/28	10.3					12.0	11.5			17.4		14.1	14.5
	49	11/29-12/05	11.3			14.6	13.3	14.2	13.4	14.0				12.2	13.2
	50	12/06-12/12	14.0			30.0	12.1	13.3	13.1			15.9		18.2	17.1
	51	12/13-12/19	12.8					17.0	13.1	14.3				10.6	12.2
	52	12/20-12/26	13.5						13.5		13.3			12.8	13.0
	53	12/27-12/31				13.8		19.3	14.5						
1988	1	01/01-01/02		13.5		17.3		11.9	14.7						
	2	01/03-01/09	11.0	11.0		18.0	13.2	12.9	12.9	13.0				17.7	16.9
	3	01/10-01/16	6.5	10.3		14.3		12.6	11.3	12.0					12.0
	4	01/17-01/23	9.5			8.7	11.8	10.8	10.2		8.0		22.0	16.5	15.8
	5	01/24-01/30	13.0	10.1	13.5		12.3	12.2	12.2					20.4	20.4
	6	01/31-02/06	9.5	10.8		16.0			11.9	14.8				11.0	14.3
	7	02/07-02/13	9.9	10.3	21.0	11.9	13.6	11.5	11.9	13.1	21.0			14.3	13.3
	8	02/14-02/20	11.8	8.3		10.7			11.2	11.8		20.3			14.5
	9	02/21-02/27	10.2	11.0		13.0	15.0		11.2	13.7	13.8			16.8	14.6
	10	02/28-03/05	12.5	11.3	11.1	14.6	11.5	15.5	12.6	14.8	17.0			13.8	15.3
	11	03/06-03/12	13.7		14.1	18.0		11.3	13.9	15.1	13.9	15.0	10.8	15.5	14.5
	12	03/13-03/19	14.4	12.6	12.3	11.6	12.0	10.3	12.4	16.2	13.2	9.0		16.0	15.3
	13	03/20-03/26	11.3	11.6	13.8	13.5			13.2	17.1	13.2		11.2	14.2	14.7
	14	03/27-04/02	11.7	18.1	13.4	12.7			14.3	16.1	13.9			15.3	15.1
	15	04/03-04/09	12.0	12.0	13.9	12.2	10.9	9.0	12.0	13.7	13.7			16.4	14.2
	16	04/10-04/16	12.0	12.9	13.5	14.7	13.7	12.6	13.1	15.4	13.7		13.8	16.2	14.7
Winter Totals			11.9	11.8	13.5	13.2	12.5	12.6	12.5	14.7	13.6	15.3	14.2	13.5	14.0
			23	05/29-06/04	11.8				11.8						
			24	06/05-06/11	14.2	15.5			14.7	13.0	12.4				12.6
			25	06/12-06/18	16.8	16.1		14.4	16.4	15.3	12.6				13.6
			26	06/19-06/25	15.3	14.6		18.5	15.6	17.1	12.6				16.0
			27	06/26-07/02	14.8	13.7	14.0	12.2	13.8	15.9	11.5	9.8			15.2
			28	07/03-07/09	12.0	11.5	15.2	11.8	12.3	15.9	12.0		14.5		15.2
			29	07/10-07/16	14.0	15.4	14.5	12.6	14.0	16.1	11.8		13.5		14.8
Summer Totals					14.3	13.2	14.7	12.1	12.9	13.3	15.9	12.1	9.8	14.2	14.8
Season Totals					13.2	12.7	14.4	12.5	12.6	12.6	13.0	15.4	13.2	15.1	14.3

- Continued -

Appendix A.6. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03					13.9										13.9	13.5
	41	10/04-10/10	10.5	13.1		11.0	14.1										14.1	13.6
	42	10/11-10/17	11.2			11.2	14.3										14.3	14.0
	43	10/18-10/24	14.7			14.7	15.0										15.0	13.9
	44	10/25-10/31	13.2	21.7		15.4	15.8										15.8	14.4
	45	11/01-11/07	11.1			11.1	16.8										16.8	15.3
	46	11/08-11/14	13.3			13.3	15.6										15.6	13.9
	47	11/15-11/21	12.2	10.6		12.0	17.3										17.3	13.7
	48	11/22-11/28	12.9			12.9	17.8							24.5			17.9	15.8
	49	11/29-12/05	12.5			12.5	19.7										19.7	17.2
	50	12/06-12/12	13.8			13.8	18.6										18.6	17.8
	51	12/13-12/19	11.1			11.1	18.2										18.2	15.6
	52	12/20-12/26	12.5			12.5	17.7										17.7	15.9
53	12/27-12/31	11.9			11.9	15.6										15.6	14.4	
1988	1	01/01-01/02					17.4										17.4	17.0
	2	01/03-01/09	12.9			12.9	17.5										17.5	16.9
	3	01/10-01/16	11.7	14.3		12.3	17.2										17.2	15.1
	4	01/17-01/23	12.1			12.1	16.3										16.3	14.3
	5	01/24-01/30	12.4	13.2		12.7	20.1										20.1	17.9
	6	01/31-02/06	15.9			15.9	19.1										19.1	18.2
	7	02/07-02/13	10.4			10.4	17.9							11.0			17.8	14.0
	8	02/14-02/20	18.0	12.8		15.5	19.8										19.8	16.4
	9	02/21-02/27	12.9	12.2		12.8	21.2										21.2	15.7
	10	02/28-03/05	12.7			12.7	20.9										20.9	15.9
	11	03/06-03/12	9.3	11.9		10.1	20.5										20.5	16.8
	12	03/13-03/19	12.2			12.2	18.0										18.0	15.5
	13	03/20-03/26	17.3			17.3	19.1										19.1	15.5
	14	03/27-04/02	15.2			15.2	20.7		13.1								19.6	15.4
	15	04/03-04/09	14.1			14.1	19.7		14.6								19.5	15.3
	16	04/10-04/16	13.7	10.1		12.7	20.1										20.1	15.4
Winter Totals			12.6	13.1		12.6	16.3		13.5					17.8			16.3	14.5

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.7. Average weight (lb) of chinook salmon harvested in Southeast Alaska by hand troll gear by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant						Northeast Quadrant							
			101	102	105	106	107	108 Total	109	110	111	112	114	115 Total		
1987	40	09/27-10/03				11.6	13.0	12.0	11.8	17.8	14.2		15.0	10.9	13.2	
	41	10/04-10/10	12.0	11.3		11.4	12.9	12.9	12.3	14.5	14.6		14.8	11.8	14.3	
	42	10/11-10/17	9.9	11.6		14.0	14.1	12.2	13.2	15.9	13.5		12.8	12.1	13.4	
	43	10/18-10/24	15.2	10.0		13.6	11.3	11.4	12.5	15.2	15.1		13.2	12.5	14.2	
	44	10/25-10/31		12.0	13.8	13.6	16.5	12.8	13.0	16.6	16.9			13.3	14.8	
	45	11/01-11/07	10.6	14.7		12.6	12.7	12.4	12.6	16.1	14.1		18.0	12.2	13.1	
	46	11/08-11/14	10.7			15.0	13.9	13.4	13.7	17.3	13.3		8.3	13.2	13.4	
	47	11/15-11/21	11.1	11.8		13.5	11.5	12.9	12.7	13.3	13.4			13.3	13.3	
	48	11/22-11/28	17.0	13.7			11.5	9.9	11.5	19.1				13.2	14.5	
	49	11/29-12/05			8.0	16.0	12.1	12.1	12.2	12.4				15.2	14.3	
	50	12/06-12/12				12.6	11.4	10.8	11.7	15.2				13.0	14.1	
	51	12/13-12/19		11.5		11.8			11.7		19.3			13.3	14.2	
	52	12/20-12/26		10.0				22.0	16.0							
	53	12/27-12/31				13.6		15.1	14.5	10.3					10.3	
1988	1	01/01-01/02						16.3	16.3							
	2	01/03-01/09				16.8	13.1	11.1	13.7	14.4			14.0		14.2	
	3	01/10-01/16				8.5		9.0	8.8	12.0			15.0	14.0	14.0	
	4	01/17-01/23				11.8		12.5	12.0	14.6			16.8		15.7	
	5	01/24-01/30				15.4		7.3	13.0	19.0	20.0		18.1		18.5	
	6	01/31-02/06				13.3			13.3	16.3			17.4		17.1	
	7	02/07-02/13	14.0	11.0		13.0	14.8	13.0	12.5				18.8		18.8	
	8	02/14-02/20				14.5	15.3	10.4	13.1		34.5		17.0		22.0	
	9	02/21-02/27	19.0			13.6		18.0	15.0	20.0			15.6		15.8	
	10	02/28-03/05	19.0			11.9	12.9	9.5	12.2		14.2		27.0	14.9	15.2	
	11	03/06-03/12			11.1	13.8	12.9	14.4	12.8	14.3			17.8		16.8	
	12	03/13-03/19	10.0		15.4	13.8	12.7	18.2	14.2	21.0	18.9		14.9		17.2	
	13	03/20-03/26	10.8		16.5	13.3	13.3	15.0	13.3	14.9	18.0		17.7		17.3	
	14	03/27-04/02	13.0		14.8	16.0	8.0	13.2	15.2	17.9	15.2		15.4		16.7	
	15	04/03-04/09	12.8	10.9		10.6	12.8	14.8	13.0	15.6	18.3		16.6		16.4	
	16	04/10-04/16	17.5	16.4	14.8	14.1	15.2	13.5	14.5	13.3	14.1		13.3		13.4	
Winter Totals			12.1	12.2	14.0	13.5	13.1	12.6	13.1	15.6	14.7		14.0	13.6	14.0	14.3
	23	05/29-06/04	15.0						15.0							
	24	06/05-06/11	16.8	14.7		18.3			17.0	15.1	12.2				12.6	
	25	06/12-06/18	15.8	16.8		19.8			17.8	14.6	14.1				14.3	
	26	06/19-06/25	18.1	13.9		20.9			19.7	21.9	15.9				20.0	
	27	06/26-07/02	11.8	13.9		20.9	13.0		18.3	17.9	13.3		12.2		14.5	
	28	07/03-07/09	14.2	13.0	15.9	15.3	16.0	18.1	14.7	15.2	12.8	12.2	12.6		13.9	
	29	07/10-07/16	14.8	12.8	11.9	14.4	16.5	18.8	13.6	15.8	12.6	14.8	12.5		14.0	
Summer Totals			15.2	13.6	14.1	18.2	15.6	18.4	16.1	15.8	12.8	12.7	12.5			14.0
Season Totals			14.9	13.4	14.1	16.5	13.8	12.7	14.9	15.8	13.3	12.7	12.9	a	14.0	14.1

- Continued -

Appendix A.7. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant								Grand Total	
			103	104	152	Total	113	114	116	154	157	181	183	189		Total
1987	40	09/27-10/03					14.8								14.8	13.8
	41	10/04-10/10					14.1						11.5		14.0	14.0
	42	10/11-10/17		12.1		12.1	13.1						10.0		13.1	13.3
	43	10/18-10/24					12.7								12.7	13.6
	44	10/25-10/31					13.4						8.5		13.3	14.1
	45	11/01-11/07	13.5			13.5	13.7								13.7	12.9
	46	11/08-11/14					17.5								17.5	13.7
	47	11/15-11/21	15.8			15.8	15.2								15.2	13.3
	48	11/22-11/28					17.4								17.4	14.5
	49	11/29-12/05					16.9								16.9	13.8
	50	12/06-12/12	12.1			12.1	17.0								17.0	13.3
	51	12/13-12/19	16.4			16.4	18.3								18.3	16.2
	52	12/20-12/26					19.5								19.5	17.8
	53	12/27-12/31					19.2								19.2	16.5
1988	1	01/01-01/02														16.3
	2	01/03-01/09	18.6			18.6	15.6								15.6	15.8
	3	01/10-01/16	11.0			11.0	16.4								16.4	14.8
	4	01/17-01/23	11.0			11.0	18.4								18.4	15.0
	5	01/24-01/30					18.8								18.8	18.0
	6	01/31-02/06	20.0			20.0	14.1								14.1	14.9
	7	02/07-02/13	8.0			8.0	21.4								21.4	17.7
	8	02/14-02/20					22.0						11.1		13.3	14.6
	9	02/21-02/27	14.7			14.7	19.0						12.2		13.3	15.3
	10	02/28-03/05	14.6			14.6	21.3						13.0		20.8	15.0
	11	03/06-03/12	9.0			9.0	22.6								22.6	15.2
	12	03/13-03/19	8.0			8.0	22.7								22.7	15.8
	13	03/20-03/26					17.4								17.4	15.1
	14	03/27-04/02	14.5			14.5	22.3						11.0		17.7	16.1
	15	04/03-04/09	16.9			16.9	20.9						10.8		18.0	15.4
	16	04/10-04/16	11.9			11.9	20.0						14.3		18.5	14.6
Winter Totals			15.6	12.1		14.8	15.3						12.0		15.2	14.2
	23	05/29-06/04														15.0
	24	06/05-06/11					9.5								9.5	14.9
	25	06/12-06/18						16.0							16.0	16.9
	26	06/19-06/25					16.8								16.8	19.6
	27	06/26-07/02	17.9	16.1		16.4	19.4	13.4				15.1	15.4		17.3	16.4
	28	07/03-07/09	16.3	16.7		16.6	19.3	14.1	16.1		19.2	13.7	16.2	16.2	17.7	15.9
	29	07/10-07/16	17.7	17.7	17.5	17.7	19.4	13.5		19.6	24.5	15.3	15.0		18.2	16.1
Summer Totals			17.0	16.7	17.5	16.8	19.4	13.8	16.1	19.6	23.7	14.6	15.8	16.2	17.7	16.1
Season Totals			16.8	16.7	17.5	16.7	18.5	13.7	16.1	19.6	23.7	14.6	15.3	16.2	17.4	15.7

^a District 114 winter troll total average is included in the Northwest Quadrant District 114 season total.

Appendix A.8. Number of boats that fished in the combined hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03		2		1	3	7	13	3	7		13	15		38
	41	10/04-10/10	11	10	1	16	13	16	67	30	54	9	34	48		175
	42	10/11-10/17	12	10	3	17	7	14	63	22	40	6	29	36		133
	43	10/18-10/24	13	2		15	9	16	55	32	36	2	22	38		130
	44	10/25-10/31	5	7	1	5	3	14	35	28	36	2		34		100
	45	11/01-11/07	9	3		9	3	20	44	7	12	1	1	24		45
	46	11/08-11/14	4	1		6	3	16	30	12	10		2	32		56
	47	11/15-11/21	7	5		1	1	11	25	8	3			29		40
	48	11/22-11/28	5	2			1	8	16	1		1		12		14
	49	11/29-12/05	2		1	3	3	11	20	4				7		11
	50	12/06-12/12	1			3	3	3	10	3		1		6		10
	51	12/13-12/19	2	1		1		1	5	1	2			9		12
	52	12/20-12/26	1	1				1	3		1			1		2
	53	12/27-12/31				2		3	5	1						1
1988	1	01/01-01/02		1		2		4	7							0
	2	01/03-01/09	1	1		4	3	5	14	4				7		11
	3	01/10-01/16	1	1		3		3	8	3				3	1	7
	4	01/17-01/23	1			3	1	3	8	4	1		1	9		15
	5	01/24-01/30	1	1	1	1	2	4	10	3	1			9		13
	6	01/31-02/06	1	1		5			7	4				7		11
	7	02/07-02/13	2	4	1	5	4	4	20	4	1			8		13
	8	02/14-02/20	2	1		4	1	4	12	1	1	1		3		6
	9	02/21-02/27	4	2		7	1	1	15	2	1			10		13
	10	02/28-03/05	7	2	2	8	2	6	27	6	6		1	15		28
	11	03/06-03/12	3		5	5	2	6	21	10	4	1	1	13		29
	12	03/13-03/19	6	5	6	10	2	7	36	15	12	1		14		42
	13	03/20-03/26	6	2	10	13	2	1	34	14	7		1	20		42
	14	03/27-04/02	7	7	7	17	1	3	42	30	19			25		74
	15	04/03-04/09	8	9	3	7	5	8	40	24	20			17		61
	16	04/10-04/16	10	11	11	12	7	12	63	26	27		1	25		79
Winter Totals			132	92	52	185	82	212	755	302	301	25	106	476	1	1,211
	23	05/29-06/04	2						2							0
	24	06/05-06/11	34	17		18			69	91	108					199
	25	06/12-06/18	40	26		26			92	60	54					114
	26	06/19-06/25	32	12		29			73	33	22					55
	27	06/26-07/02	19	11	4	30	2		66	82	36	1	42			161
	28	07/03-07/09	24	26	22	42	13	2	129	140	45	2	59			246
	29	07/10-07/16	19	27	21	32	1	2	102	110	47	2	58			217
Summer Totals			170	119	47	177	16	4	533	516	312	5	159	0	0	992
Season Totals			302	211	99	362	98	216	1,288	818	613	30	265	^a	1	2,203

- Continued -

Appendix A.8. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant											Grand Total
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189	Total	
1987	40	09/27-10/03				0	60										60	111
	41	10/04-10/10	2	2		4	118								2		120	366
	42	10/11-10/17	4	1		5	91								1		92	293
	43	10/18-10/24	3			3	65										65	253
	44	10/25-10/31	3	2		5	57								1		58	198
	45	11/01-11/07	5			5	57										57	151
	46	11/08-11/14	2			2	36										36	124
	47	11/15-11/21	4	1		5	29										29	99
	48	11/22-11/28	1			1	32								1		33	64
	49	11/29-12/05	3			3	25										25	59
	50	12/06-12/12	2			2	30										30	52
	51	12/13-12/19	7			7	36										36	60
	52	12/20-12/26	1			1	12										12	18
	53	12/27-12/31	3			3	26										26	35
1988	1	01/01-01/02				0	8										8	15
	2	01/03-01/09	6			6	48										48	79
	3	01/10-01/16	5	2		7	41										41	63
	4	01/17-01/23	6			6	27										27	56
	5	01/24-01/30	3	1		4	30										30	57
	6	01/31-02/06	3			3	42										42	63
	7	02/07-02/13	6			6	34								1		35	74
	8	02/14-02/20	2	1		3	13								2		15	36
	9	02/21-02/27	8	1		9	28								1		29	66
	10	02/28-03/05	14			14	34								1		35	104
	11	03/06-03/12	5	1		6	38										38	94
	12	03/13-03/19	8			8	60										60	146
	13	03/20-03/26	3			3	42										42	121
	14	03/27-04/02	7			7	29		1						1		31	154
	15	04/03-04/09	14			14	34		1						1		36	151
	16	04/10-04/16	14	2		16	60								2		62	220
Winter Totals			144	14	0	158	1,242	0	2	0	0	0	0	0	14	0	1,258	3,382
	23	05/29-06/04				0											0	2
	24	06/05-06/11				0	6										6	274
	25	06/12-06/18				0		7									7	213
	26	06/19-06/25				0	9	4									13	141
	27	06/26-07/02	17	88		105	188	60						3	2		253	585
	28	07/03-07/09	55	190		245	510	125	14	1	5	8	13	4	8	2	690	1,310
	29	07/10-07/16	45	176	4	225	463	102	17	1	32	10	44	6	12	6	693	1,237
Summer Totals			117	454	4	575	1,176	298	31	2	37	18	57	13	22	8	1,662	3,762
Season Totals			261	468	4	733	2,418	774	33	2	37	18	57	13	36	8	2,920	7,144

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.9. Number of boats that fished in the power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant					
			101	102	105	106	107	108	Total	109	110	111	112	114	Total
1987	40	09/27-10/03		2			2	2	6		2			3	5
	41	10/04-10/10	9	9	1	6	7	9	41	15	38	9	3	23	88
	42	10/11-10/17	10	7	3	8	2	7	37	11	25	6	3	23	68
	43	10/18-10/24	10	1		7	4	5	27	18	28	2	3	17	68
	44	10/25-10/31	5	4		2	2	3	16	19	26	2		17	64
	45	11/01-11/07	8	1		5	1	11	26	1	4	1		13	19
	46	11/08-11/14	3	1		3	2	7	16	8	7		1	18	34
	47	11/15-11/21	5	2				4	11	5	1			14	20
	48	11/22-11/28	4					4	8			1		7	8
	49	11/29-12/05	2			2	2	4	10	1				2	3
	50	12/06-12/12	1			1	2	1	5			1		1	2
	51	12/13-12/19	2					1	3	1				3	4
	52	12/20-12/26	1						1		1			1	2
	53	12/27-12/31				1		1	2						0
1988	1	01/01-01/02		1		2		2	5						0
	2	01/03-01/09	1	1		2	1	3	8	1				3	4
	3	01/10-01/16	1	1		2		2	6	1					1
	4	01/17-01/23	1			1	1	2	5		1		1	2	4
	5	01/24-01/30	1	1	1		2	3	8					2	2
	6	01/31-02/06	1	1		2			4	2				1	3
	7	02/07-02/13	1	3	1	3	2	3	13	4	1			2	7
	8	02/14-02/20	2	1		1			4	1		1			2
	9	02/21-02/27	3	2		3	1		9	1	1			3	5
	10	02/28-03/05	6	2	2	4	1	4	19	6	4			2	12
	11	03/06-03/12	3		4	1		2	10	7	4	1	1	6	19
	12	03/13-03/19	4	5	3	6	1	2	21	11	8	1		5	25
	13	03/20-03/26	4	2	8	7			21	11	6		1	10	28
	14	03/27-04/02	5	7	4	10			26	23	16			17	56
	15	04/03-04/09	6	7	3	4	4	1	25	17	17			9	43
	16	04/10-04/16	8	9	8	6	5	6	42	20	24		1	19	64
Winter Totals			107	70	38	89	42	89	435	184	214	25	14	223	660
	23	05/29-06/04	1						1						0
	24	06/05-06/11	21	13					34	78	77				155
	25	06/12-06/18	25	17		2			44	48	35				83
	26	06/19-06/25	19	7		7			33	27	17				44
	27	06/26-07/02	9	2	4	6			21	50	10	1			61
	28	07/03-07/09	8	11	12	17	3		51	66	10		7		83
	29	07/10-07/16	7	14	15	13			49	52	13		8		73
Summer Totals			90	64	31	45	3	0	233	321	162	1	15	0	499
Season Totals			197	134	69	134	45	89	668	505	376	26	29	^a 1,159	

- Continued -

Appendix A.9. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03				0	41										41	52
	41	10/04-10/10	2	2		4	94										94	227
	42	10/11-10/17	4			4	72										72	181
	43	10/18-10/24	3			3	51										51	149
	44	10/25-10/31	3	2		5	44										44	129
	45	11/01-11/07	4			4	51										51	100
	46	11/08-11/14	2			2	32										32	84
	47	11/15-11/21	3	1		4	24										24	59
	48	11/22-11/28	1			1	26							1			27	44
	49	11/29-12/05	3			3	19										19	35
	50	12/06-12/12	1			1	27										27	35
	51	12/13-12/19	5			5	30										30	42
	52	12/20-12/26	1			1	10										10	14
	53	12/27-12/31	3			3	22										22	27
1988	1	01/01-01/02				0	8										8	13
	2	01/03-01/09	5			5	45										45	62
	3	01/10-01/16	4	2		6	34										34	47
	4	01/17-01/23	5			5	21										21	35
	5	01/24-01/30	3	1		4	24										24	38
	6	01/31-02/06	2			2	37										37	46
	7	02/07-02/13	5			5	28							1			29	54
	8	02/14-02/20	2	1		3	11										11	20
	9	02/21-02/27	7	1		8	27										27	49
	10	02/28-03/05	12			12	31										31	74
	11	03/06-03/12	4	1		5	35										35	69
	12	03/13-03/19	7			7	57										57	110
	13	03/20-03/26	3			3	40										40	92
	14	03/27-04/02	5			5	27			1							28	115
	15	04/03-04/09	13			13	32			1							33	114
	16	04/10-04/16	10	2		12	56										56	174
Winter Totals			122	13	0	135	1,056	0	2	0	0	0	0	0	2	0	1,060	2,290
	23	05/29-06/04				0											0	1
	24	06/05-06/11				0	5										5	194
	25	06/12-06/18				0		6									6	133
	26	06/19-06/25				0	4	4									8	85
	27	06/26-07/02	3	49		52	113	18									131	265
	28	07/03-07/09	14	128		142	398	33	13	1	5	8	12		1		471	747
	29	07/10-07/16	9	123	3	135	353	30	17	1	30	10	41	3	3	6	494	751
Summer Totals			26	300	3	329	873	91	30	2	35	18	53	3	3	7	1,115	2,176
Season Totals			148	313	3	464	1,929	314	32	2	35	18	53	3	5	7	2,175	4,466

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.10. Number of boats that fished in the hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03				1	1	5	7	3	5		13	12		33
	41	10/04-10/10	2	1		10	6	7	26	15	16		31	25		87
	42	10/11-10/17	2	3		9	5	7	26	11	15		26	13		65
	43	10/18-10/24	3	1		8	5	11	28	14	8		19	21		62
	44	10/25-10/31		3	1	3	1	11	19	9	10			17		36
	45	11/01-11/07	1	2		4	2	9	18	6	8		1	11		26
	46	11/08-11/14	1			3	1	9	14	4	3		1	14		22
	47	11/15-11/21	2	3		1	1	7	14	3	2			15		20
	48	11/22-11/28	1	2			1	4	8	1				5		6
	49	11/29-12/05			1	1	1	7	10	3				5		8
	50	12/06-12/12				2	1	2	5	3				5		8
	51	12/13-12/19		1		1			2		2			6		8
	52	12/20-12/26		1				1	2							0
	53	12/27-12/31				1		2	3	1						1
1988	1	01/01-01/02						2	2							0
	2	01/03-01/09				2	2	2	6	3				4		7
	3	01/10-01/16				1		1	2	2				3	1	6
	4	01/17-01/23				2		1	3	4				7		11
	5	01/24-01/30				1		1	2	3	1			7		11
	6	01/31-02/06				3			3	2				6		8
	7	02/07-02/13	1	1		2	2	1	7					6		6
	8	02/14-02/20				3	1	4	8		1			3		4
	9	02/21-02/27	1			4		1	6	1				7		8
	10	02/28-03/05	1			4	1	2	8		2		1	13		16
	11	03/06-03/12			1	4	2	4	11	3				7		10
	12	03/13-03/19	2		3	4	1	5	15	4	4			9		17
	13	03/20-03/26	2		2	6	2	1	13	3	1			10		14
	14	03/27-04/02	2		3	7	1	3	16	7	3			8		18
	15	04/03-04/09	2	2		3	1	7	15	7	3			8		18
	16	04/10-04/16	2	2	3	6	2	6	21	6	3			6		15
Winter Totals			25	22	14	96	40	123	320	118	87	0	92	253	1	551
	23	05/29-06/04	1						1							0
	24	06/05-06/11	13	4		18			35	13	31					44
	25	06/12-06/18	15	9		24			48	12	19					31
	26	06/19-06/25	13	5		22			40	6	5					11
	27	06/26-07/02	10	9		24	2		45	32	26		42			100
	28	07/03-07/09	16	15	10	25	10	2	78	74	35	2	52			163
	29	07/10-07/16	12	13	6	19	1	2	53	58	34	2	50			144
Summer Totals			80	55	16	132	13	4	300	195	150	4	144	0	0	493
Season Totals			105	77	30	228	53	127	620	313	237	4	236	^a	1	1,044

- Continued -

Appendix A.10. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant								Grand Total	
			103	104	152	Total	113	114	116	154	157	181	183	189		Total
1987	40	09/27-10/03				0	19								19	59
	41	10/04-10/10				0	24					2			26	139
	42	10/11-10/17		1		1	19					1			20	112
	43	10/18-10/24				0	14								14	104
	44	10/25-10/31				0	13					1			14	69
	45	11/01-11/07	1			1	6								6	51
	46	11/08-11/14				0	4								4	40
	47	11/15-11/21	1			1	5								5	40
	48	11/22-11/28				0	6								6	20
	49	11/29-12/05				0	6								6	24
	50	12/06-12/12	1			1	3								3	17
	51	12/13-12/19	2			2	6								6	18
	52	12/20-12/26				0	2								2	4
	53	12/27-12/31				0	4								4	8
1988	1	01/01-01/02				0									0	2
	2	01/03-01/09	1			1	3								3	17
	3	01/10-01/16	1			1	7								7	16
	4	01/17-01/23	1			1	6								6	21
	5	01/24-01/30				0	6								6	19
	6	01/31-02/06	1			1	5								5	17
	7	02/07-02/13	1			1	6								6	20
	8	02/14-02/20				0	2					2			4	16
	9	02/21-02/27	1			1	1					1			2	17
	10	02/28-03/05	2			2	3					1			4	30
	11	03/06-03/12	1			1	3								3	25
	12	03/13-03/19	1			1	3								3	36
	13	03/20-03/26				0	2								2	29
	14	03/27-04/02	2			2	2					1			3	39
	15	04/03-04/09	1			1	2					1			3	37
	16	04/10-04/16	4			4	4					2			6	46
Winter Totals			22	1	0	23	186	0	0	0	0	0	12	0	198	1,092
	23	05/29-06/04				0									0	1
	24	06/05-06/11				0	1								1	80
	25	06/12-06/18				0		1							1	80
	26	06/19-06/25				0	5								5	56
	27	06/26-07/02	14	39		53	75	42			3	2			122	320
	28	07/03-07/09	41	62		103	112	92	1		4	8	1		219	563
	29	07/10-07/16	36	53	1	90	110	72		2	3	3	9		199	486
Summer Totals			91	154	1	246	303	207	1	2	4	10	19	1	547	1,586
Season Totals			113	155	1	269	489	460	1	2	4	10	31	1	745	2,678

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.11. Catch per boat in the combined hand and power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03		12		27	33	8	16	3	21		5	8		9
	41	10/04-10/10	22	27	5	24	24	8	20	52	65	45	17	22		40
	42	10/11-10/17	19	21	9	26	17	18	20	27	54	42	11	21		31
	43	10/18-10/24	13	5		27	9	9	15	40	64	9	7	20		35
	44	10/25-10/31	8	14	6	15	6	7	9	39	27	50		19		28
	45	11/01-11/07	5	12		21	2	11	11	22	6	45	1	16		15
	46	11/08-11/14	7	17		11	16	6	9	19	13		3	21		18
	47	11/15-11/21	3	8		16	2	6	6	23	6			20		19
	48	11/22-11/28	5	2			19	7	6	7		17		12		12
	49	11/29-12/05	10		1	5	9	9	8	4				4		4
	50	12/06-12/12	1			5	9	5	6	6		9		5		5
	51	12/13-12/19	12	2		4		2	6	23	2			5		6
	52	12/20-12/26	13	1				1	5		3			5		4
	53	12/27-12/31				15		6	9	3				5		3
1988	1	01/01-01/02		2		7		4	4							0
	2	01/03-01/09	1	28		5	6	6	7	3				5		4
	3	01/10-01/16	2	39		5		7	10	29				1	1	13
	4	01/17-01/23	8			9	6	6	8	8	2		1	5		5
	5	01/24-01/30	4	22	32	7	4	2	8	2	4			3		3
	6	01/31-02/06	2	21		3			6	5				3		3
	7	02/07-02/13	6	8	1	8	8	4	7	27	2			4		11
	8	02/14-02/20	9	3		3	6	3	4	22	2	10		2		7
	9	02/21-02/27	8	13		4	1	3	6	11	8			5		6
	10	02/28-03/05	5	15	16	6	11	2	7	6	5		2	4		5
	11	03/06-03/12	3		21	5	11	2	8	10	30	18	4	5		10
	12	03/13-03/19	2	24	11	11	6	2	10	23	14	1		7		14
	13	03/20-03/26	6	19	18	13	12	1	13	10	17		5	13		12
	14	03/27-04/02	10	17	12	13	1	2	12	25	31			14		23
	15	04/03-04/09	10	11	8	3	14	3	8	10	12			8		10
	16	04/10-04/16	8	18	17	11	11	13	13	18	25		6	10		18
Winter Totals			9	16	14	14	13	7	11	25	37	35	11	14	1	23
	23	05/29-06/04	14						14							0
	24	06/05-06/11	14	15		5			12	8	12					10
	25	06/12-06/18	10	16		6			11	4	7					5
	26	06/19-06/25	7	6		7			7	19	10					15
	27	06/26-07/02	13	11	60	18	11		18	27	18	29	13			21
	28	07/03-07/09	24	78	42	55	18	4	47	54	45	12	32			47
	29	07/10-07/16	18	27	54	38	6	2	34	37	40	3	17			32
Summer Totals			14	30	49	26	16	3	24	30	21	12	21			26
Season Totals			12	24	31	20	13	7	17	28	29	31	17	a	1	24

- Continued -

Appendix A.11. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant										Grand Total	
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189		Total
1987	40	09/27-10/03				0	17										17	14
	41	10/04-10/10	17	4		10	29								2		29	33
	42	10/11-10/17	19	48		25	28							1			28	27
	43	10/18-10/24	8			8	21										21	27
	44	10/25-10/31	9	5		7	24								2		24	23
	45	11/01-11/07	9			9	24										24	17
	46	11/08-11/14	7			7	9										9	13
	47	11/15-11/21	19	9		17	12										12	14
	48	11/22-11/28	10			10	9								2		9	9
	49	11/29-12/05	18			18	11										11	9
	50	12/06-12/12	6			6	6										6	6
	51	12/13-12/19	14			14	6										6	7
	52	12/20-12/26	4			4	3										3	4
	53	12/27-12/31	16			16	5										5	7
1988	1	01/01-01/02				0	25										25	15
	2	01/03-01/09	17			17	19										19	15
	3	01/10-01/16	11	8		10	9										9	10
	4	01/17-01/23	6			6	4										4	5
	5	01/24-01/30	15	37		21	14										14	11
	6	01/31-02/06	3			3	9										9	7
	7	02/07-02/13	10			10	5								2		5	7
	8	02/14-02/20	5	8		6	5								4		5	5
	9	02/21-02/27	11	5		10	4								5		4	6
	10	02/28-03/05	11			11	6								1		6	7
	11	03/06-03/12	5	10		6	8										8	9
	12	03/13-03/19	15			15	8										8	11
	13	03/20-03/26	3			3	7										7	11
	14	03/27-04/02	6			6	7		33						9		8	16
	15	04/03-04/09	13			13	11		13						4		11	10
	16	04/10-04/16	4	10		5	10								6		10	13
Winter Totals			10	12	0	11	15	0	23	0	0	0	0	0	4	0	15	17
	23	05/29-06/04				0											0	14
	24	06/05-06/11				0	2										2	11
	25	06/12-06/18				0		17									17	8
	26	06/19-06/25				0	6	14									8	10
	27	06/26-07/02	14	63		55	31	12						15	7		26	29
	28	07/03-07/09	27	75		64	77	23	156	210	86	99	186	10	27	223	71	63
	29	07/10-07/16	18	33	43	30	55	17	130	125	85	227	208	152	14	634	70	53
Summer Totals			21	56	43	49	60	18	142	168	85	170	203	76	18	531	63	45
Season Totals			15	55	43	41	37	16	134	168	85	170	203	76	12	531	42	32

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.12. Catch per boat in the power troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant					
			101	102	105	106	107	108	Total	109	110	111	112	114	Total
1987	40	09/27-10/03		12			49	11	24		47			12	26
	41	10/04-10/10	27	29	5	54	35	12	29	95	88	45	31	41	70
	42	10/11-10/17	21	26	9	42	11	27	26	43	76	42	17	28	49
	43	10/18-10/24	16	9		46	8	20	23	62	78	9	15	38	59
	44	10/25-10/31	8	19		13	8	5	11	52	35	50		25	38
	45	11/01-11/07	5	23		27	1	12	13	139	14	45		23	28
	46	11/08-11/14	8	17		18	15	9	12	27	16		2	26	23
	47	11/15-11/21	3	16				7	7	33	8			34	32
	48	11/22-11/28	6					12	9			17		17	17
	49	11/29-12/05	10			7	9	8	8	8				3	5
	50	12/06-12/12	1			1	9	3	5			9		9	9
	51	12/13-12/19	12					2	9	23				10	13
	52	12/20-12/26	13						13		3			5	4
	53	12/27-12/31				20		3	12						0
1988	1	01/01-01/02		2		7		6	6						0
	2	01/03-01/09	1	28		5	6	7	8	4				7	6
	3	01/10-01/16	2	39		5		7	11	85					85
	4	01/17-01/23	8			6	6	5	6		2		1	7	4
	5	01/24-01/30	4	22	32		4	2	9					3	3
	6	01/31-02/06	2	21		4			8	7				2	5
	7	02/07-02/13	10	7	1	12	14	5	9	27	2			5	17
	8	02/14-02/20	9	3		3			6	22		10			16
	9	02/21-02/27	10	13		6	1		8	19	8			4	8
	10	02/28-03/05	6	15	16	8	4	2	8	6	6			6	6
	11	03/06-03/12	3		21	1		2	10	12	30	18	4	6	14
	12	03/13-03/19	3	24	19	8	1	2	11	29	19	1		8	20
	13	03/20-03/26	7	19	22	15			16	11	20		5	21	16
	14	03/27-04/02	12	17	13	16			15	29	35			19	28
	15	04/03-04/09	13	12	8	4	13	1	10	11	13			11	12
	16	04/10-04/16	9	21	19	11	10	21	16	20	27		6	12	20
Winter Totals			11	19	17	20	15	11	15	36	49	35	15	23	35
	23	05/29-06/04	4						4						0
	24	06/05-06/11	15	16					15	9	14				11
	25	06/12-06/18	12	21		3			15	4	9				6
	26	06/19-06/25	8	8		5			7	22	12				18
	27	06/26-07/02	15	28	60	20			26	34	27	29			33
	28	07/03-07/09	47	158	65	117	37		98	87	114		101		91
	29	07/10-07/16	32	42	67	76			57	60	97		39		64
Summer Totals			17	47	65	70	37	0	42	37	26	29	68	0	35
Season Totals			14	33	39	36	17	11	24	37	39	35	42	a	35

- Continued -

Appendix A.12. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant											Grand Total
			103	104	152	Total	113	114	116	150	154	156	157	181	183	189	Total	
1987	40	09/27-10/03				0	19										19	20
	41	10/04-10/10	17	4		10	34										34	47
	42	10/11-10/17	19			19	33										33	37
	43	10/18-10/24	8			8	25										25	40
	44	10/25-10/31	9	5		7	28										28	30
	45	11/01-11/07	10			10	26										26	22
	46	11/08-11/14	7			7	10										10	16
	47	11/15-11/21	21	9		18	15										15	19
	48	11/22-11/28	10			10	10								2		9	11
	49	11/29-12/05	18			18	13										13	11
	50	12/06-12/12	4			4	6										6	6
	51	12/13-12/19	11			11	6										6	8
	52	12/20-12/26	4			4	4										4	5
	53	12/27-12/31	16			16	5										5	7
1988	1	01/01-01/02					25										25	17
	2	01/03-01/09	14			14	20										20	17
	3	01/10-01/16	13	8		12	10										10	12
	4	01/17-01/23	7			7	4										4	5
	5	01/24-01/30	15	37		21	16										16	14
	6	01/31-02/06	4			4	9										9	8
	7	02/07-02/13	12			12	5								2		5	8
	8	02/14-02/20	5	8		6	5										5	7
	9	02/21-02/27	12	5		11	4										4	6
	10	02/28-03/05	12			12	6										6	8
	11	03/06-03/12	6	10		7	9										9	10
	12	03/13-03/19	17			17	9										9	12
	13	03/20-03/26	3			3	8										8	12
	14	03/27-04/02	5			5	7		33								8	19
	15	04/03-04/09	13			13	12		13								12	12
	16	04/10-04/16	5	10		6	10										10	15
Winter Totals			11	9	0	11	16	0	23	0	0	0	0	0	2	0	16	21
	23	05/29-06/04				0											0	4
	24	06/05-06/11				0	2										2	12
	25	06/12-06/18				0		19									19	9
	26	06/19-06/25				0	10	14									12	13
	27	06/26-07/02	20	96		92	41	7									37	46
	28	07/03-07/09	66	96		93	91	50	161	210	86	99	198			400	94	94
	29	07/10-07/16	46	42	56	42	68	39	130	125	89	227	218	296	16	634	93	79
Summer Totals			54	74	56	72	74	34	143	168	88	170	213	296	16	601	86	67
Season Totals			19	71	56	54	42	26	136	168	88	170	213	296	10	601	52	43

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.13. Catch per boat in the hand troll harvest of chinook salmon in Southeast Alaska by district and statistical week, 1 October 1987 to 16 July 1988.

Year	Stat. Week	Inclusive Dates	Southeast Quadrant							Northeast Quadrant						
			101	102	105	106	107	108	Total	109	110	111	112	114	115	Total
1987	40	09/27-10/03				27	2	7	9	3	11		5	7		6
	41	10/04-10/10	2	7		6	11	3	6	8	10		15	5		10
	42	10/11-10/17	9	9		12	19	8	12	10	16		10	10		11
	43	10/18-10/24	4	1		10	10	4	7	12	15		6	5		8
	44	10/25-10/31		8	6	16	2	7	8	12	7			13		11
	45	11/01-11/07	7	7		14	3	9	9	3	2		1	8		5
	46	11/08-11/14	3			4	18	4	5	4	4		3	15		11
	47	11/15-11/21	4	3		16	2	5	5	5	5			6		6
	48	11/22-11/28	1	2			19	2	4	7				5		5
	49	11/29-12/05			1	2	10	9	8	3				4		4
	50	12/06-12/12				8	9	7	7	6				4		5
	51	12/13-12/19		2		4			3		2			3		3
	52	12/20-12/26		1				1	1							0
	53	12/27-12/31				9		8	8	3						3
1988	1	01/01-01/02						2	2							0
	2	01/03-01/09				5	6	4	5	2				3		3
	3	01/10-01/16				6		6	6	1			1		1	1
	4	01/17-01/23				11		8	10	8			5			6
	5	01/24-01/30				7		3	5	2	4		3			3
	6	01/31-02/06				3			3	3			3			3
	7	02/07-02/13	1	10		1	3	1	3				4			4
	8	02/14-02/20				3	6	3	3		2		2			2
	9	02/21-02/27	1			2		3	2	2			5			5
	10	02/28-03/05	1			4	18	3	5		5		2	4		4
	11	03/06-03/12			23	6	11	2	7	3			3			3
	12	03/13-03/19	2		3	17	11	2	7	7	3		6			5
	13	03/20-03/26	3		1	11	12	1	7	3	1		6			5
	14	03/27-04/02	4		10	8	1	2	6	10	9		4			7
	15	04/03-04/09	2	7		2	17	3	4	7	6		5			6
	16	04/10-04/16	1	4	11	11	14	5	8	14	6		4			8
Winter Totals			3	5	8	8	11	5	7	8	9	0	10	6	1	8
	23	05/29-06/04	24					24								0
	24	06/05-06/11	14	12		5		9	3	8						7
	25	06/12-06/18	7	8		6		7	3	3						3
	26	06/19-06/25	6	3		8		7	7	4						6
	27	06/26-07/02	11	7		18	11	14	15	15		13				14
	28	07/03-07/09	12	19	15	13	12	4	14	25	26	12	22			24
	29	07/10-07/16	9	11	20	12	6	2	12	17	18	3	14			16
Summer Totals			10	11	17	11	11	3	11	18	15	8	17	0	0	16
Season Totals			8	10	13	10	11	5	9	14	13	8	14	a	1	12

- Continued -

Appendix A.13. (Page 2 of 2).

Year	Stat. Week	Inclusive Dates	Southwest Quadrant				Northwest Quadrant								Grand Total	
			103	104	152	Total	113	114	116	154	157	181	183	189		Total
1987	40	09/27-10/03				0	13								13	9
	41	10/04-10/10				0	9					2			9	9
	42	10/11-10/17		48		48	9					1			8	11
	43	10/18-10/24				0	9								9	8
	44	10/25-10/31				0	9					2			8	10
	45	11/01-11/07	8			8	5								5	6
	46	11/08-11/14				0	4								4	8
	47	11/15-11/21	12			12	2								2	5
	48	11/22-11/28				0	5								5	5
	49	11/29-12/05				0	6								6	6
	50	12/06-12/12	7			7	4								4	5
	51	12/13-12/19	22			22	5								5	6
	52	12/20-12/26				0	1								1	1
1988	53	12/27-12/31				0	6								6	6
	1	01/01-01/02				0									0	2
	2	01/03-01/09	34			34	14								14	7
	3	01/10-01/16	1			1	7								7	4
	4	01/17-01/23	3			3	3								3	5
	5	01/24-01/30				0	8								8	5
	6	01/31-02/06	1			1	9								9	5
	7	02/07-02/13	3			3	5								5	4
	8	02/14-02/20				0	1					4			3	3
	9	02/21-02/27	3			3	1					5			3	3
	10	02/28-03/05	5			5	5					1			4	4
	11	03/06-03/12	1			1	7								7	5
	12	03/13-03/19	1			1	2								2	6
	13	03/20-03/26				0	5								5	6
	14	03/27-04/02	9			9	7					9			7	7
	15	04/03-04/09	7			7	5					4			5	5
16	04/10-04/16	2			2	8					6			8	7	
Winter Totals			7	48	0	9	8	0	0	0	0	0	4	0	7	7
	23	05/29-06/04				0									0	24
	24	06/05-06/11				0	2								2	8
	25	06/12-06/18				0		1							1	5
	26	06/19-06/25				0	2								2	6
	27	06/26-07/02	13	21		19	15	14				15	7		14	15
	28	07/03-07/09	13	30		23	27	13	84		42	10	27	45	21	21
	29	07/10-07/16	10	12	2	11	13	8		23	73	7	14		12	13
Summer Totals			12	22	2	18	18	12	84	23	66	10	18	45	16	16
Season Totals			11	22	2	17	14	9	84	23	66	10	13	45	14	12

^a District 114 winter troll total is included in the Northwest Quadrant District 114 season total.

Appendix A.14. Purse seine harvest in pounds of large chinook salmon (≥ 28 in) in Southeast Alaska by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District								Total
		101	102	103	104	109	112	113	114	
28	07/03-07/09	2,517					2,684			5,201
29	07/10-07/16						2,323			2,323
30	07/17-07/23					10	874			884
31	07/24-07/30							4	35	39
32	07/31-08/06				36	4				40
33	08/07-08/13	1,862	1,579		104,299	700	289			108,729
34	08/14-08/20	159	306	66	44,064	338	1,530			46,463
35	08/21-08/27		757	1,761	64,653	265	154		42	67,632
36	08/28-09/03			15	152	5				172
Totals		4,538	2,642	1,842	213,204	1,322	7,854	4	77	231,483

Appendix A.15. Purse seine harvest in pounds of small chinook salmon (< 28 in) in Southeast Alaska by district and statistical week, 1988.

Stat. Week	Inclusive Date	District										Total
		101	102	103	104	105	109	110	112	113	114	
28	07/03-07/09	145			78				354			577
29	07/10-07/16	180	11		385		45	7	306	4	22	960
30	07/17-07/23	22			322		239		68			651
31	07/24-07/30				7	5	142		6	20		180
32	07/31-08/06	12	47		76		8					143
33	08/07-08/13		165		106		253		45			569
34	08/14-08/20	10			95		23		94	3		225
35	08/21-08/27		33	1	61		178		4		352	629
36	08/28-09/03			29		18	46			7		100
37	09/04-09/10		260	51			24					335
38	09/11-09/17		3								12	15
39	09/18-09/24		128									128
40	09/25-10/01		26									26
41	10/02-10/08		113									113
Totals		369	786	81	1,130	23	958	7	877	34	386	4,651

Appendix A.16. Average weight (lb) of large chinook salmon (≥ 28 in) harvested in Southeast Alaska by purse seine gear by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District								Total
		101	102	103	104	109	112	113	114	
28	07/03-07/09	17.9					15.9			16.8
29	07/10-07/16						14.3			14.3
30	07/17-07/23					10.0	15.9			15.8
31	07/24-07/30							4.0	7.0	6.5
32	07/31-08/06				4.0	4.0				4.0
33	08/07-08/13	16.6	13.6		20.8	25.0	12.6			20.5
34	08/14-08/20	19.9	13.3	22.0	21.4	14.7	14.3			20.9
35	08/21-08/27		13.8	17.3	23.2	11.0	17.1		6.0	22.7
36	08/28-09/03			3.8	10.1	5.0				8.6
Totals		17.4	13.6	16.9	21.5	16.9	15.0	4.0	6.4	20.9

Appendix A.17. Average weight (lb) of small chinook salmon (< 28 in) harvested in Southeast Alaska by purse seine gear by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District										Total
		101	102	103	104	105	109	110	112	113	114	
28	07/03-07/09	20.7			7.8				4.1			5.6
29	07/10-07/16	5.1	2.8		5.3		4.5	3.5	4.0	2.0	2.8	4.6
30	07/17-07/23	22.0			5.0		4.5		4.3			4.9
31	07/24-07/30				7.0	1.7	4.2		6.0	4.0		4.1
32	07/31-08/06	4.0	4.3		5.1		4.0					4.6
33	08/07-08/13		5.7		5.0		4.7		5.0			5.0
34	08/14-08/20	5.0			4.8		7.7		4.3	3.0		4.7
35	08/21-08/27		4.1	1.0	6.1		4.6		2.0		5.0	4.8
36	08/28-09/03			5.8		2.6	3.5			3.5		3.7
37	09/04-09/10		3.3	3.9			4.8					3.4
38	09/11-09/17		3.0								4.0	3.8
39	09/18-09/24		3.7									3.7
40	09/25-10/01		2.9									2.9
41	10/02-10/08		2.5									2.5
Totals			3.5	4.3	5.3	2.3	4.5	3.5	4.1	3.4	4.7	4.5

Appendix A.18. Number of boats that fished in the Southeast Alaska purse seine fishery by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District								Total
		101	102	103	104	109	112	113	114	
28	07/03-07/09	12					46			58
29	07/10-07/16						48			48
30	07/17-07/23					1	23			24
31	07/24-07/30							1	1	2
32	07/31-08/06				1	1				2
33	08/07-08/13	45	31		183	8	6			273
34	08/14-08/20	6	8	2	163	10	52			241
35	08/21-08/27		12	19	148	7	5		2	193
36	08/28-09/03			3	7	1				11
Totals		63	51	24	502	28	180	1	3	852

Appendix A.19. Catch per boat by week of large chinook salmon (≥ 28 in) in the Southeast Alaska purse seine fishery by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District								Total
		101	102	103	104	109	112	113	114	
28	07/03-07/09	12					4			5
29	07/10-07/16						3			3
30	07/17-07/23					1	2			2
31	07/24-07/30							1	5	3
32	07/31-08/06				9	1				5
33	08/07-08/13	2	4		27	4	4			19
34	08/14-08/20	1	3	2	13	2	2			9
35	08/21-08/27		5	5	19	3	2		4	15
36	08/28-09/03			1	2	1				2
Totals		4	4	5	20	3	3	1	4	13

Appendix A.20. Gillnet harvest in pounds of chinook salmon in Southeast Alaska
by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District						Total
		101	102	106	108	111	115	
24	06/05-06-11			1,310				1,310
25	06/12-06/18			2,510	2,047			4,557
26	06/19-06/25	9,489		4,173	1,574	3,030	143	18,409
27	06/26-07/02	10,367		18,340	1,381	4,534	593	35,215
28	07/03-07/09	7,175		15,596	4,460	3,004	937	31,172
29	07/10-07/16	5,146		5,176	4,782	3,634	1,247	19,985
30	07/17-07/23	1,920		1,556	358	3,251	554	7,639
31	07/24-07/30	1,029		346		390	2,697	4,462
32	07/31-08/06	1,456		806		204	2,072	4,538
33	08/07-08/13	778		91		456	670	1,995
34	08/14-08/20	180		969		532	379	2,060
35	08/21-08/27	33	48	42		1,093	244	1,460
36	08/28-09/03	52		16		331	321	720
37	09/04-09/10	11				425	356	792
38	09/11-09/17	24				20	281	325
39	09/18-09/24	13				1	196	210
40	09/25-10/01						527	527
41	10/02-10/08						70	70
Totals		37,673	48	50,931	14,602	20,905	11,287	135,446

Appendix A.21. Average weight (lb) of chinook salmon harvested in Southeast Alaska by gillnet gear by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District						Total
		101	102	106	108	111	115	
24	06/05-06-11			19.3				19.3
25	06/12-06/18			20.6	22.7			21.5
26	06/19-06/25	15.8		14.5	16.4	11.8	20.4	14.8
27	06/26-07/02	14.7		19.9	15.5	13.5	12.4	16.7
28	07/03-07/09	13.8		18.3	17.9	12.4	9.4	15.9
29	07/10-07/16	13.9		16.1	21.3	13.2	8.6	15.0
30	07/17-07/23	14.0		10.2	13.3	12.2	9.4	11.9
31	07/24-07/30	12.4		9.6		9.5	8.5	9.3
32	07/31-08/06	14.9		9.4		6.8	8.4	9.9
33	08/07-08/13	12.8		13.0		8.6	7.7	9.6
34	08/14-08/20	9.0		9.7		7.4	7.4	8.5
35	08/21-08/27	11.0	8.0	8.4		9.3	9.4	9.2
36	08/28-09/03	10.4		8.0		9.5	9.7	9.6
37	09/04-09/10	11.0				8.9	10.2	9.4
38	09/11-09/17	12.0				10.0	10.4	10.5
39	09/18-09/24	6.5				1.0	11.5	10.5
40	09/25-10/01						9.9	9.9
41	10/02-10/08						14.0	14.0
Totals		14.4	8.0	17.2	18.8	11.8	9.0	14.4

Appendix A.22. Number of boats that fished in the Southeast Alaska chinook salmon gillnet fishery by district and statistical week, 1988.

Stat. Week	Inclusive Dates	District					Total	
		101	102	106	108	111		115
24	06/05-06-11			8				8
25	06/12-06/18			4	3			7
26	06/19-06/25	87		37	7	17	3	151
27	06/26-07/02	116		63	8	50	19	256
28	07/03-07/09	96		38	10	37	35	216
29	07/10-07/16	94		38	5	49	31	217
30	07/17-07/23	52		43	1	61	24	181
31	07/24-07/30	25		24		19	62	130
32	07/31-08/06	44		30		8	65	147
33	08/07-08/13	30		7		11	40	88
34	08/14-08/20	11		26		28	30	95
35	08/21-08/27	1	4	3		30	21	59
36	08/28-09/03	3		2		21	23	49
37	09/04-09/10	1				14	26	41
38	09/11-09/17	2				2	22	26
39	09/18-09/24	2				1	15	18
40	09/25-10/01						23	23
41	10/02-10/08						5	5
Totals		564	4	323	34	348	444	1,717

Appendix A.23. Catch per boat in the Southeast Alaska chinook salmon gillnet fishery by district and statistical week, 1988.

Stat Week	Inclusive Dates	District						Total
		101	102	106	108	111	115	
24	06/05-06-11			9				9
25	06/12-06/18			31	30			30
26	06/19-06/25	7		8	14	15	2	8
27	06/26-07/02	6		15	11	7	3	8
28	07/03-07/09	5		22	25	7	3	9
29	07/10-07/16	4		8	45	6	5	6
30	07/17-07/23	3		4	27	4	2	4
31	07/24-07/30	3		2		2	5	4
32	07/31-08/06	2		3		4	4	3
33	08/07-08/13	2		1		5	2	2
34	08/14-08/20	2		4		3	2	3
35	08/21-08/27	3	2	2		4	1	3
36	08/28-09/03	2		1		2	1	2
37	09/04-09/10	1				3	1	2
38	09/11-09/17	1				1	1	1
39	09/18-09/24	1				1	1	1
40	09/25-10/01						2	2
41	10/02-10/08						1	1
Totals		5	2	9	23	5	3	5

APPENDIX B
WEIR COUNTS

Appendix B.1. Little Tahltan River (108-80-120) weir count for chinook salmon, 1988.

Date	Number				Proportions	
	Adults	Jacks	Daily Total	Cumulative	Daily	Cumulative
June 27	6	1	7	7	0.0009	0.0009
28	38	1	39	46	0.0051	0.0060
29	18	0	18	64	0.0024	0.0084
30	1	0	1	65	0.0001	0.0085
July 1	41	2	43	108	0.0056	0.0142
2	138	1	139	247	0.0182	0.0324
3	369	10	379	626	0.0497	0.0822
4	117	1	118	744	0.0155	0.0977
5	174	5	179	923	0.0235	0.1211
6	324	8	332	1,255	0.0436	0.1647
7	196	3	199	1,454	0.0261	0.1908
8	306	9	315	1,769	0.0413	0.2322
9	263	14	277	2,046	0.0364	0.2685
10	375	27	402	2,448	0.0528	0.3213
11	108	5	113	2,561	0.0148	0.3361
12	17	0	17	2,578	0.0022	0.3384
13	71	9	80	2,658	0.0105	0.3489
14	26	10	36	2,694	0.0047	0.3536
15	448	24	472	3,166	0.0620	0.4155
16	8	1	9	3,175	0.0012	0.4167
17	480	43	523	3,698	0.0686	0.4854
18	132	8	140	3,838	0.0184	0.5037
19	456	19	475	4,313	0.0623	0.5661
20	202	6	208	4,521	0.0273	0.5934
21	111	6	117	4,638	0.0154	0.6087
22	117	8	125	4,763	0.0164	0.6251
23	64	4	68	4,831	0.0089	0.6341
24	73	3	76	4,907	0.0100	0.6440
25	65	4	69	4,976	0.0091	0.6531
26	478	22	500	5,476	0.0656	0.7187
27	88	4	92	5,568	0.0121	0.7308
28	156	7	163	5,731	0.0214	0.7522
29	107	6	113	5,844	0.0148	0.7670
30	0	0	0	5,844	0.0000	0.7670
31	86	4	90	5,934	0.0118	0.7788
Aug. 1	336	12	348	6,282	0.0457	0.8245
2	242	10	252	6,534	0.0331	0.8576
3	461	11	472	7,006	0.0620	0.9195
4	91	2	93	7,099	0.0122	0.9317
5	33	2	35	7,134	0.0046	0.9363
6	23	0	23	7,157	0.0030	0.9394
7	122	3	125	7,282	0.0164	0.9558
8	127	5	132	7,414	0.0173	0.9731
9	44	3	47	7,461	0.0062	0.9793
10	75	3	78	7,539	0.0102	0.9895
11	27	1	28	7,567	0.0037	0.9932
12	16	0	16	7,583	0.0021	0.9953
13	21	0	21	7,604	0.0028	0.9980
14	0	0	0	7,604	0.0000	0.9980
15	7	0	7	7,611	0.0009	0.9990
16	8	0	8	7,619	0.0011	1.0000

Mean Date of Migration = July 19; Variance (Days Squared) = 128.8

Appendix B.2. King Salmon River (111-17-010) weir count for chinook salmon, 1988.

		Number				Proportions		
Date		Females	Large Males	Small Males	Daily Total	Cumulative	Daily	Cumulative
June	30	0	0	0	0	0	0.0000	0.0000
July	1	1	1	7	9	9	0.0316	0.0316
	2	2	3	3	8	17	0.0281	0.0596
	3	2	5	1	8	25	0.0281	0.0877
	4	3	7	2	12	37	0.0421	0.1298
	5	4	2	0	6	43	0.0211	0.1509
	6	3	5	3	11	54	0.0386	0.1895
	7	1	3	3	7	61	0.0246	0.2140
	8	2	4	3	9	70	0.0316	0.2456
	9	5	2	3	10	80	0.0351	0.2807
	10	1	3	0	4	84	0.0140	0.2947
	11	5	9	1	15	99	0.0526	0.3474
	12	10	21	8	39	138	0.1368	0.4842
	13	7	7	4	18	156	0.0632	0.5474
	14	3	5	0	8	164	0.0281	0.5754
	15	9	8	0	17	181	0.0596	0.6351
	16	16	12	1	29	210	0.1018	0.7368
	17	1	6	1	8	218	0.0281	0.7649
	18	4	3	2	9	227	0.0316	0.7965
	19	2	2	1	5	232	0.0175	0.8140
	20	4	1	1	6	238	0.0211	0.8351
	21	3	7	1	11	249	0.0386	0.8737
	22	2	3	1	6	255	0.0211	0.8947
	23	4	2	2	8	263	0.0281	0.9228
	24	3	3	2	8	271	0.0281	0.9509
	25	0	0	1	1	272	0.0035	0.9544
	26	2	2	2	6	278	0.0211	0.9754
	27	1	3	0	4	282	0.0140	0.9895
	28 ^a	0	2	1	3	285	0.0105	1.0000
Mean Date of Migration = July 13; Variance (Days Squared) = 43.7								

^a An estimated 12 chinook salmon were below the weir after it was pulled.

Appendix B.3. Little Tatsamenie Lake (111-32-254) weir count for chinook salmon, 1988.

Date	Number				Proportions	
	Adults	Jacks	Daily Total	Cumulative	Daily	Cumulative
August 1	2	0	2	2	0.0023	0.0023
2	0	0	0	2	0.0000	0.0023
3	45	1	46	48	0.0526	0.0549
4	4	0	4	52	0.0046	0.0595
5	0	0	0	52	0.0000	0.0595
6	13	2	15	67	0.0172	0.0767
7	88	4	92	159	0.1053	0.1819
8	43	2	45	204	0.0515	0.2334
9	12	0	12	216	0.0137	0.2471
10	17	2	19	235	0.0217	0.2689
11	16	0	16	251	0.0183	0.2872
12	27	6	33	284	0.0378	0.3249
13	24	5	29	313	0.0332	0.3581
14	76	3	79	392	0.0904	0.4485
15	76	15	91	483	0.1041	0.5526
16	13	11	24	507	0.0275	0.5801
17	63	8	71	578	0.0812	0.6613
18	42	16	58	636	0.0664	0.7277
19	18	3	21	657	0.0240	0.7517
20	19	5	24	681	0.0275	0.7792
21	13	2	15	696	0.0172	0.7963
22	13	0	13	709	0.0149	0.8112
23	9	3	12	721	0.0137	0.8249
24	36	10	46	767	0.0526	0.8776
25	27	1	28	795	0.0320	0.9096
26	31	8	39	834	0.0446	0.9542
27	9	1	10	844	0.0114	0.9657
28	8	0	8	852	0.0092	0.9748
29	3	1	4	856	0.0046	0.9794
30	5	1	6	862	0.0069	0.9863
31	2	0	2	864	0.0023	0.9886
Sept. 1	1	0	1	865	0.0011	0.9897
2	1	0	1	866	0.0011	0.9908
3	2	0	2	868	0.0023	0.9931
4	1	1	2	870	0.0023	0.9954
5	0	0	0	870	0.0000	0.9954
6	2	1	3	873	0.0034	0.9989
7	0	0	0	873	0.0000	0.9989
8	0	0	0	873	0.0000	0.9989
9	0	0	0	873	0.0000	0.9989
10	0	0	0	873	0.0000	0.9989
11	0	0	0	873	0.0000	0.9989
12	0	0	0	873	0.0000	0.9989
13	0	0	0	873	0.0000	0.9989
14	0	0	0	873	0.0000	0.9989
15	0	0	0	873	0.0000	0.9989
16	0	0	0	873	0.0000	0.9989
17	0	0	0	873	0.0000	0.9989
18	0	0	0	873	0.0000	0.9989
19	0	0	0	873	0.0000	0.9989
20	1	0	1	874	0.0011	1.0000
Mean Date of Migration = August 15; Variance (Days Squared) = 49.9						

Appendix B.4. Hackett River (111-32-260) weir count for chinook salmon, 1988.

		Number				Proportions	
Date		Adults	Jacks	Daily Total	Cumulative	Daily	Cumulative
July	11	0	13	13	13	0.0085	0.0085
	12	6	14	20	33	0.0130	0.0215
	13	5	23	28	61	0.0182	0.0397
	14	1	4	5	66	0.0033	0.0430
	15	7	21	28	94	0.0182	0.0612
	16	9	20	29	123	0.0189	0.0801
	17	57	120	177	300	0.1152	0.1953
	18	6	16	22	322	0.0143	0.2096
	19	2	16	18	340	0.0117	0.2214
	20	1	6	7	347	0.0046	0.2259
	21	24	38	62	409	0.0404	0.2663
	22	1	1	2	411	0.0013	0.2676
	23	3	0	3	414	0.0020	0.2695
	24	1	0	1	415	0.0007	0.2702
	25	18	13	31	446	0.0202	0.2904
	26	65	141	206	652	0.1341	0.4245
	27	48	130	178	830	0.1159	0.5404
	28	12	32	44	874	0.0286	0.5690
	29	19	18	37	911	0.0241	0.5931
	30	14	36	50	961	0.0326	0.6257
	31	8	48	56	1,017	0.0365	0.6621
August	1	21	6	27	1,044	0.0176	0.6797
	2	30	11	41	1,085	0.0267	0.7064
	3	26	34	60	1,145	0.0391	0.7454
	4	29	47	76	1,221	0.0495	0.7949
	5	14	22	36	1,257	0.0234	0.8184
	6	10	25	35	1,292	0.0228	0.8411
	7	22	81	103	1,395	0.0671	0.9082
	8	15	37	52	1,447	0.0339	0.9421
	9	4	3	7	1,454	0.0046	0.9466
	10	18	29	47	1,501	0.0306	0.9772
	11	2	4	6	1,507	0.0039	0.9811
	12	0	0	0	1,507	0.0000	0.9811
	13	10	2	12	1,519	0.0078	0.9889
	14	0	4	4	1,523	0.0026	0.9915
	15	1	1	2	1,525	0.0013	0.9928
	16	2	0	2	1,527	0.0013	0.9941
	17	3	4	7	1,534	0.0046	0.9987
	18	1	1	2	1,536	0.0013	1.0000
Mean Date of Migration = July 28; Variance (Days Squared) = 67.9							

Appendix B.5. Kluksu River (182-30-020) weir count for chinook salmon, 1988.

Number						Proportions						Number						Proportions					
Date		Daily Total		Cumulative		Daily		Cumulative		Date		Daily Total		Cumulative		Daily		Cumulative					
June	26	1	1	0.0005	0.0005	July	30	17	1,802	0.0083	0.8846	Aug.	31	24	1,826	0.0118	0.8964						
	27	1	2	0.0005	0.0010		28	21	1,847	0.0103	0.9067												
	28	2	4	0.0010	0.0020		29	25	1,872	0.0123	0.9190												
	29	3	7	0.0015	0.0034		30	16	1,888	0.0079	0.9269												
	30	5	12	0.0025	0.0059		31	12	1,900	0.0059	0.9327												
July	1	1	13	0.0005	0.0064	5	17	1,917	0.0083	0.9411	6	13	1,930	0.0064	0.9475								
	2	6	19	0.0029	0.0093	7	6	1,936	0.0029	0.9504													
	3	3	22	0.0015	0.0108	8	6	1,942	0.0029	0.9534													
	4	53	75	0.0260	0.0368	9	4	1,946	0.0020	0.9553													
	5	83	158	0.0407	0.0776	10	9	1,955	0.0044	0.9597													
	6	19	177	0.0093	0.0869	11	4	1,959	0.0020	0.9617													
	7	103	280	0.0506	0.1375	12	8	1,967	0.0039	0.9656													
	8	10	290	0.0049	0.1424	13	4	1,971	0.0020	0.9676													
	9	3	293	0.0015	0.1438	14	3	1,974	0.0015	0.9691													
	10	19	312	0.0093	0.1532	15	3	1,977	0.0015	0.9705													
	11	17	329	0.0083	0.1615	16	2	1,979	0.0010	0.9715													
	12	38	367	0.0187	0.1802	17	3	1,982	0.0015	0.9730													
	13	251	618	0.1232	0.3034	18	3	1,985	0.0015	0.9745													
	14	151	769	0.0741	0.3775	19	4	1,989	0.0020	0.9764													
	15	19	788	0.0093	0.3868	20	1	1,990	0.0005	0.9769													
	16	85	873	0.0417	0.4286	21	4	1,994	0.0020	0.9789													
	17	85	958	0.0417	0.4703	22	4	1,998	0.0020	0.9809													
	18	87	1,045	0.0427	0.5130	23	9	2,007	0.0044	0.9853													
	19	236	1,281	0.1159	0.6289	24	13	2,020	0.0064	0.9917													
	20	161	1,442	0.0790	0.7079	25	5	2,025	0.0025	0.9941													
	21	86	1,528	0.0422	0.7501	26	4	2,029	0.0020	0.9961													
	22	78	1,606	0.0383	0.7884	27	0	2,029	0.0000	0.9961													
	23	7	1,613	0.0034	0.7919	28	3	2,032	0.0015	0.9975													
	24	17	1,630	0.0083	0.8002	29	4	2,036	0.0020	0.9995													
	25	37	1,667	0.0182	0.8184	30	0	2,036	0.0000	0.9995													
26	43	1,710	0.0211	0.8395	31	1	2,037	0.0005	1.0000														
27	46	1,756	0.0226	0.8621																			
28	17	1,773	0.0083	0.8704																			
29	12	1,785	0.0059	0.8763																			
Mean Date of Run = July 19; Variance (Days Squared) = 104.7																							

Appendix B.6. Situk River (182-70-010) weir count for chinook salmon, 1988.

Number					Proportions			Number					Proportions		
		Daily									Daily				
Date	Adults	Jacks	Total	Cumulative	Daily	Cumulative	Date	Adults	Jacks	Total	Cumulative	Daily	Cumulative		
June 11	5	0	5	5	0.0046	0.0046	July 17	9	7	16	513	0.0148	0.4759		
12	0	0	0	5	0.0000	0.0046	18	17	10	27	540	0.0250	0.5009		
13	9	0	9	14	0.0083	0.0130	19	27	12	39	579	0.0362	0.5371		
14	0	0	0	14	0.0000	0.0130	20	19	1	20	599	0.0186	0.5557		
15	2	0	2	16	0.0019	0.0148	21	13	1	14	613	0.0130	0.5686		
16	1	0	1	17	0.0009	0.0158	22	0	0	0	613	0.0000	0.5686		
17	1	0	1	18	0.0009	0.0167	23	212	16	228	841	0.2115	0.7801		
18	2	0	2	20	0.0019	0.0186	24	4	0	4	845	0.0037	0.7839		
19	9	0	9	29	0.0083	0.0269	25	46	7	53	898	0.0492	0.8330		
20	12	0	12	41	0.0111	0.0380	26	2	2	4	902	0.0037	0.8367		
21	3	0	3	44	0.0028	0.0408	27	72	9	81	983	0.0751	0.9119		
22	6	3	9	53	0.0083	0.0492	28	0	2	2	985	0.0019	0.9137		
23	0	0	0	53	0.0000	0.0492	29	1	0	1	986	0.0009	0.9147		
24	7	0	7	60	0.0065	0.0557	30	21	22	43	1,029	0.0399	0.9545		
25	4	0	4	64	0.0037	0.0594	31	0	0	0	1,029	0.0000	0.9545		
26	11	0	11	75	0.0102	0.0696	Aug. 1	9	0	9	1,038	0.0083	0.9629		
27	11	1	12	87	0.0111	0.0807	2	6	6	12	1,050	0.0111	0.9740		
28	22	4	26	113	0.0241	0.1048	3	3	0	3	1,053	0.0028	0.9768		
29	49	5	54	167	0.0501	0.1549	4	4	0	4	1,057	0.0037	0.9805		
30	40	1	41	208	0.0380	0.1929	5	0	0	0	1,057	0.0000	0.9805		
July 1	3	0	3	211	0.0028	0.1957	6	2	2	4	1,061	0.0037	0.9842		
2	10	10	20	231	0.0186	0.2143	7	0	0	0	1,061	0.0000	0.9842		
3	9	4	13	244	0.0121	0.2263	8	0	0	0	1,061	0.0000	0.9842		
4	7	0	7	251	0.0065	0.2328	9	1	0	1	1,062	0.0009	0.9852		
5	2	0	2	253	0.0019	0.2347	10	0	0	0	1,062	0.0000	0.9852		
6	4	0	4	257	0.0037	0.2384	11	0	0	0	1,062	0.0000	0.9852		
7	18	5	23	280	0.0213	0.2597	12	0	0	0	1,062	0.0000	0.9852		
8	11	10	21	301	0.0195	0.2792	13	0	2	2	1,064	0.0019	0.9870		
9	9	0	9	310	0.0083	0.2876	14	1	0	1	1,065	0.0009	0.9879		
10	21	3	24	334	0.0223	0.3098	15	0	0	0	1,065	0.0000	0.9879		
11	13	4	17	351	0.0158	0.3256	16	0	0	0	1,065	0.0000	0.9879		
12	57	13	70	421	0.0649	0.3905	17	2	0	2	1,067	0.0019	0.9898		
13	23	15	38	459	0.0353	0.4258	18	1	0	1	1,068	0.0009	0.9907		
14	16	4	20	479	0.0186	0.4443	19	4	0	4	1,072	0.0037	0.9944		
15	1	6	7	486	0.0065	0.4508	20	4	0	4	1,076	0.0037	0.9981		
16	6	5	11	497	0.0102	0.4610	21	1	1	2	1,078	0.0019	1.0000		
Mean Date of Migration = July 15; Variance (Days Squared) = 157.4															

APPENDIX C
HISTORICAL DATA

Appendix C.1. Historical catches and migratory timing statistics of chinook salmon harvested in the winter and summer troll fisheries, 1960-1988. Fishery was closed where there was no catch reported.

	Stat. Week	1960 1961	1961 1962	1962 1963	1963 1964	1964 1965	1965 1966	1966 1967	1967 1968	1968 1969	1969 1970	1970 1971	1971 1972	1972 1973	1973 1974	1974 1975	1975 1976
Winter Troll	40	2,041	1,277	985	2,764	1,814	443	215	2,706	1,129	1,366	441	1,197	372	1,815	925	1,013
	41	4,494	721	1,484	2,272	2,286	1,240	1,281	1,442	1,555	1,189	509	1,206	924	1,972	1,759	1,005
	42	2,403	518	1,544	2,191	1,449	2,968	2,724	1,129	949	651	872	788	768	803	620	1,641
	43	2,347	207	984	1,512	947	1,814	978	1,063	686	551	811	1,229	1,819	672	453	1,021
	44	1,121	203	1,122	1,647	1,037	1,638	1,780	1,191	584	471	263	445	849	719	461	1,849
	45	802	67	193	1,485	671	1,332	1,151	1,126	508	154	244	610	666	446	562	388
	46	970	7	228	1,282	819	1,606	465	759	873	130	117	188	525	282	567	304
	47	1,031	87	180	750	882	605	987	587	471	342	156	270	555	48	500	256
	48	394	19	187	249	495	423	272	271	323	83	84	172	172	75	234	292
	49	178	2	187	384	289	194	185	240	69	152	0	54	81	57	374	190
	50	49	3	21	920	250	180	139	289	38	42	8	55	33	46	226	37
	51	139	15	189	822	97	265	195	315	78	160	28	3	44	140	256	137
	52	35	0	79	321	68	105	101	108	31	31	24	11	46	13	90	51
	53	5	0	0	241	23	12	168	19	22	32	16	10	226	70	4	44
	1	0	5	0	43	0	0	147	150	4	15	0	7	1	43	65	39
	2	9	52	4	365	4	35	109	110	39	38	15	0	9	13	10	2
	3	34	9	41	645	13	6	111	110	10	20	0	16	29	0	2	59
	4	101	1	64	310	19	32	99	133	53	13	14	0	0	5	27	25
	5	6	7	132	476	87	46	50	61	22	111	14	0	20	54	25	46
	6	27	83	57	372	57	67	116	74	18	107	35	12	50	7	56	38
	7	157	10	66	304	39	97	138	66	23	42	35	48	14	6	52	73
	8	25	45	89	265	85	126	211	349	51	140	51	14	95	21	13	107
	9	135	14	55	522	111	102	181	233	79	95	29	12	41	48	85	88
	10	56	55	106	330	87	63	296	279	33	260	49	12	42	18	348	189
	11	83	64	163	704	164	161	261	323	66	248	51	3	84	38	35	141
	12	126	15	135	318	279	299	421	440	41	212	125	43	87	135	81	229
	13	242	118	65	558	289	184	343	295	86	268	93	20	89	203	225	238
	14	255	16	126	490	163	398	1,355	441	91	446	90	57	324	219	288	525
	15	303	110	263	670	284	414	537	470	133	213	84	21	285	308	745	377
	16	843	101	127	1,244	570	866	1,797	719	233	712	302	84	381	774	706	679
Summer Troll	17	2,529	774	791	1,479	1,312	939	3,957	1,155	762	1,290	676	198	1,138	2,120	3,210	1,155
	18	4,194	1,388	1,756	3,216	3,207	4,158	2,719	2,492	2,634	3,740	2,243	641	1,385	4,037	3,227	2,456
	19	5,914	3,734	6,027	6,926	4,369	3,408	6,693	5,937	4,551	5,255	3,679	2,586	2,581	6,447	6,647	4,333
	20	6,970	3,596	6,992	7,652	8,287	5,467	15,528	9,545	8,823	10,194	4,494	2,573	6,103	12,632	10,525	5,223
	21	14,618	4,527	12,051	13,951	64,198	9,967	13,001	13,811	13,635	15,814	12,719	5,362	8,517	15,792	12,771	10,127
	22	17,148	9,447	14,085	17,038	15,318	13,222	20,998	22,839	14,770	16,519	17,765	7,567	12,724	22,840	17,586	12,248
	23	17,925	10,518	9,291	31,903	13,878	19,916	18,861	19,621	15,508	26,204	20,515	11,374	17,353	19,163	17,639	18,535
	24	17,427	15,883	15,417	22,738	14,653	21,815	25,703	19,392	23,083	33,954	24,308	16,642	21,033	27,020	19,770	21,776
	25	15,626	16,472	21,348	27,587	20,401	19,113	22,373	22,872	19,945	27,631	29,605	19,952	24,499	33,049	25,361	18,535
	26	13,942	8,560	13,164	25,176	15,483	26,683	14,931	21,613	18,885	21,483	27,761	20,364	23,702	23,586	22,302	17,955
	27	11,138	8,959	14,366	24,826	18,753	27,808	13,338	27,782	22,434	22,314	32,478	14,727	27,395	16,951	24,970	21,381
	28	10,829	8,682	10,594	13,335	9,776	14,059	12,154	15,759	21,316	21,414	21,205	17,043	31,800	19,768	14,566	8,212
	29	10,661	9,370	12,125	15,425	17,738	16,104	16,865	24,836	18,331	22,314	21,186	15,323	19,226	16,110	17,757	13,918
	30	9,448	10,329	11,125	18,623	15,653	14,810	11,000	19,815	26,210	14,737	17,604	14,457	21,827	14,275	13,140	8,809
	31	7,719	9,767	14,537	15,906	12,479	12,380	12,772	18,353	15,133	15,490	15,056	12,593	12,741	15,598	12,664	9,971
	32	9,182	8,664	10,368	15,880	15,659	9,173	8,635	12,221	15,842	10,274	13,759	16,968	12,509	13,865	13,465	11,545
	33	5,500	8,600	15,139	13,995	11,612	12,497	10,485	14,323	13,811	10,175	10,684	11,163	13,306	12,723	19,912	7,183
	34	5,953	7,233	9,270	10,383	9,081	10,265	7,069	7,750	7,131	5,575	8,372	16,639	14,537	14,842	3,171	8,264
	35	3,226	7,297	12,616	6,925	6,331	10,513	7,453	5,159	9,936	3,969	5,574	11,799	7,743	8,652	5,869	7,381
	36	3,430	4,873	5,871	6,757	5,123	8,246	5,166	2,865	4,606	5,126	5,716	5,870	6,661	5,724	3,563	6,191
	37	2,359	3,264	3,290	4,626	4,371	3,756	3,318	1,594	1,591	2,282	3,655	5,208	3,224	3,220	2,418	3,784
	38	1,980	2,153	3,356	3,681	3,465	3,163	2,629	2,465	1,851	1,634	2,863	2,613	7,339	2,863	5,470	2,260
	39	1,043	1,419	1,767	2,690	2,679	1,084	1,613	687	2,684	701	2,297	3,190	1,755	1,901	348	1,030
Year Total ^a		217,172	169,340	234,222	335,174	307,204	284,267	274,074	308,384	292,130	306,383	308,774	241,439	307,729	322,228	286,145	233,355
MTD ^b		27.2	28.0	28.2	27.6	26.9	28.1	26.8	27.3	27.8	26.6	27.3	29.1	28.2	27.1	27.1	27.5
SD ^c		6.6	5.4	5.9	6.6	6.1	6.0	6.4	5.7	5.3	5.0	4.7	5.2	5.2	5.4	5.6	5.8
CV ^c		24	19	21	24	23	21	24	21	19	19	17	18	19	20	21	21

- Continued -

Appendix C.1. (Page 2 of 2).

	Stat. Week	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1960-1988		
		1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	Mean	SD	CV
Winter Troll	40	545	511	430	690	0	78	69	17	1,679	1,370	1,542	1,581	1,036	772	75
	41	764	793	439	571	0	891	2,500	3,165	3,724	6,464	4,136	11,916	2,168	2,395	111
	42	1,111	2,538	434	626	44	854	1,818	2,659	1,829	2,101	3,166	8,002	1,686	1,509	90
	43	798	141	605	654	373	566	2,310	2,054	2,441	2,246	1,957	6,718	1,356	1,262	93
	44	676	225	302	257	455	771	1,193	781	620	1,545	2,540	4,568	1,047	907	87
	45	383	154	234	447	228	148	966	1,668	602	1,034	1,069	2,565	711	569	80
	46	397	198	312	300	220	274	802	1,035	1,047	539	1,209	1,634	610	455	75
	47	503	108	54	77	187	367	544	690	449	163	622	1,352	458	332	73
	48	83	113	134	107	23	209	555	681	386	360	290	558	259	173	67
	49	410	121	155	105	28	181	585	568	804	274	316	531	240	198	82
	50	220	90	68	79	67	244	322	397	291	273	574	306	188	201	107
	51	81	22	124	64	45	100	288	211	286	196	796	423	197	202	102
	52	94	79	68	16	11	108	432	181	74	115	278	68	94	99	106
	53	47	34	7	20	56	74	133	116	3	48	55	230	61	73	119
	1	34	28	8	41	2	9	2	97	34	116	7	228	40	57	143
	2	12	50	54	37	39	41	156	131	86	54	209	1,171	102	224	219
	3	78	104	32	12	30	27	104	234	222	104	523	617	114	181	159
	4	106	53	35	22	46	30	207	338	309	194	176	278	96	106	110
	5	87	128	48	10	87	83	418	189	407	166	310	625	133	163	123
	6	68	10	32	19	120	169	636	603	417	383	219	452	154	185	120
	7	64	43	40	87	291	371	489	305	154	455	443	510	158	164	104
	8	99	242	19	54	259	183	907	727	268	127	342	175	182	206	114
	9	114	141	30	113	268	75	432	811	334	82	754	370	191	211	111
	10	260	41	59	120	1,103	203	1,047	1,180	348	195	294	683	277	329	119
	11	124	224	48	987	646	419	1,339	1,460	311	438	551	827	356	392	110
	12	227	211	132	192	828	741	1,155	1,556	454	727	680	1,564	409	427	104
	13	189	546	179	389	605	953	2,422	1,598	1,356	510	912	1,287	509	561	110
	14	264	614	427	359	1,000	1,004	1,446	3,355	1,167	681	1,105	2,454	684	754	110
	15	375	371	614	910	867	1,572	2,632	4,569	1,188	746	1,323	1,520	782	937	120
	16	548	3,490	1,665	694	1,679	1,873	5,219	1,462	1,173	1,165	2,227	2,916	1,223	1,142	93
Summer Troll	17	756	4,680	3,188	1,421	0	0	32	67	2	0	0	1	1,201	1,274	106
	18	1,866	7,412	6,662	3,089	0	0	59	47	0	0	0	0	2,237	1,995	89
	19	4,632	12,692	7,826	5,362	8	81	14	240	105	0	0	0	3,930	3,126	80
	20	8,084	14,762	10,825	11,065	1,511	365	7	75	67	0	0	0	6,120	4,791	78
	21	14,893	19,750	13,818	7,906	19,921	10,740	14,137	3	65	0	0	0	12,218	11,811	97
	22	16,782	19,176	19,180	17,856	30,538	19,695	27,438	61	140	0	0	0	14,392	8,301	58
	23	21,231	28,676	27,240	14,664	21,766	23,094	23,274	22,277	24,583	143	474	28	17,702	8,101	46
	24	23,033	25,065	22,475	18,816	19,569	31,341	35,494	41,135	40,949	357	1,248	2,907	21,536	9,935	46
	25	19,351	23,338	24,666	20,060	18,208	4,588	180	27,533	80	14,785	7,948	1,683	18,814	8,749	47
	26	22,424	28,051	20,973	22,064	25,648	33,529	98	28,147	0	38,995	48,795	1,471	20,921	10,710	51
	27	18,277	19,170	20,143	20,014	142	24,469	4,802	8,191	41,787	35,203	59,309	16,916	21,359	11,715	55
	28	16,970	21,958	19,385	22,442	13,607	16,650	42,088	8,094	32,845	38,546	53,803	82,028	22,105	16,058	73
	29	18,974	20,844	24,909	13,888	19,576	23,076	21,385	24,578	23,099	27,370	42,457	65,747	21,185	10,790	51
	30	16,282	21,925	17,661	3,262	15,876	19,476	23,685	23,173	16,592	0	0	0	14,278	7,104	50
	31	10,327	23,271	20,210	17,510	15,221	22,542	21,909	19,163	5	0	0	0	12,976	6,622	51
	32	8,751	17,203	17,732	17,099	11,405	1	21,801	3	51	0	0	0	10,431	6,405	61
	33	8,826	17,861	15,903	20,806	9,361	46	1,793	0	9	1	6	21	9,491	6,403	68
	34	9,584	14,283	9,704	16,147	897	2	44	0	0	14,342	0	30	7,520	5,416	72
	35	6,969	10,644	17,593	18,846	6,235	0	14	0	13,194	17,536	0	0	7,553	5,312	70
	36	8,158	9,059	9,786	10,845	7,638	0	408	0	12	17,294	0	0	5,321	3,918	74
	37	4,983	4,319	50	7,559	354	2	0	4	0	10,085	0	0	2,846	2,445	86
	38	1,441	1,283	241	4,614	1,103	0	0	0	38	29	2	0	2,091	1,831	88
	39	1,365	349	714	491	600	0	0	0	0	0	0	0	1,086	981	90
Year Total		272,720	377,194	337,672	303,885	248,791	242,315	269,790	235,629	216,086	237,557	242,667	226,961	272,832	46,097	17
MTD		27.3	26.9	27.2	28.2	26.4	26.1	26.6	26.5	27.5	29.9	27.9	29.6	27.5		
SD		5.6	5.5	5.3	5.7	5.2	4.6	6.4	6.5	6.0	5.9	5.7	7.7		0.9	
CV		20	21	19	20	20	18	24	25	22	20	21	26			3

^a Year total covers part of two years (eg. year total for 1987-1988 starts 1 October of 1987 and ends 30 September 1988).

^b MTD = Mean timing date measured in mean statistical week.

^c SD = Standard deviation; CV = coefficient of variation.

Appendix C.2. Southeast Alaska Region annual commercial chinook salmon catches by gear, in numbers and percent, 1960-1988.

Year	Seine	Drift Gillnet	Set Gillnet	Troll	Trap & Misc.	Private Hatchery	Total
1960	6,509 (2%)	11,523 (4%)	908 (<1%)	282,404 (94%)			301,344
1961	4,134 (2%)	9,440 (4%)	2,534 (1%)	204,289 (93%)			220,397
1962	10,145 (5%)	10,161 (5%)	2,747 (1%)	173,597 (88%)			196,650
1963	6,659 (3%)	6,427 (2%)	941 (<1%)	243,679 (95%)			257,706
1964	16,819 (5%)	9,371 (3%)	1,488 (<1%)	329,461 (92%)			357,139
1965	14,992 (4%)	11,892 (4%)	1,323 (<1%)	308,902 (92%)			337,109
1966	11,877 (4%)	12,527 (4%)	1,555 (1%)	282,083 (92%)			308,042
1967	9,054 (3%)	16,464 (5%)	742 (<1%)	274,678 (91%)			300,938
1968	13,335 (4%)	12,902 (4%)	697 (<1%)	304,455 (92%)	122 (<1%)		331,511
1969	6,730 (2%)	15,178 (5%)	1,936 (1%)	290,168 (92%)			314,012
1970	5,954 (2%)	9,460 (3%)	2,299 (1%)	304,602 (94%)	55 (<1%)		322,370
1971	4,799 (1%)	15,718 (5%)	2,041 (1%)	311,439 (93%)			333,997
1972	16,800 (6%)	25,142 (9%)	2,467 (1%)	242,282 (84%)	135 (<1%)		286,826
1973	8,751 (3%)	24,471 (7%)	2,733 (1%)	307,806 (90%)	72 (<1%)		343,833
1974	6,759 (2%)	15,481 (4%)	2,214 (1%)	322,101 (93%)	15 (<1%)		346,570
1975	2,056 (1%)	9,082 (3%)	2,224 (1%)	287,342 (96%)	3 (<1%)		300,707
1976	1,426 (1%)	7,222 (3%)	1,830 (1%)	231,239 (96%)	45 (<1%)		241,762
1977	5,243 (2%)	5,600 (2%)	2,549 (1%)	271,735 (95%)	51 (<1%)		285,178
1978	13,998 (3%)	8,302 (2%)	3,057 (1%)	375,433 (94%)	634 (<1%)		401,424
1979	10,079 (3%)	13,827 (4%)	4,299 (1%)	338,319 (92%)	1,095 (<1%)		367,619
1980	11,704 (4%)	5,471 (2%)	2,800 (1%)	301,609 (94%)	750 (<1%)		322,334
1981	10,268 (4%)	6,528 (2%)	2,069 (1%)	251,919 (93%)	834 (<1%)		271,618
1982	31,183 (10%)	15,807 (5%)	1,456 (<1%)	249,967 (83%)	1,459 (<1%)		299,872
1983	13,581 (5%)	4,904 (2%)	976 (<1%)	271,496 (93%)	200 (<1%)		291,157
1984	20,777 (8%)	10,377 (4%)	1,062 (<1%)	235,641 (87%)	1,599 (1%)	937 (<1%)	270,393
1985	23,120 (9%)	10,703 (4%)	1,231 (<1%)	218,541 (85%)	1,537 (1%)	2,658 (1%)	257,790
1986	13,361 (5%)	7,949 (3%)	1,427 (1%)	239,375 (90%)	1,537 (1%)	1,093 (<1%)	264,742
1987	6,297 (2%)	8,957 (3%)	2,072 (1%)	268,891 (93%)	918 (<1%)	2,376 (1%)	289,511
1988	12,109 (5%)	9,386 (4%)	893 (<1%)	226,909 (87%)	1,138 (<1%)	10,049 (4%)	260,484
1960-1987							
Average	10,943 (4%)	11,460 (4%)	1,917 (1%)	275,838 (92%)	615 (<1%)	1,766 (<1%)	300,805

Appendix C.3. Historical value of the Southeast Alaska chinook salmon fisheries, 1977-1988 (E. Dinneford, Commercial Fisheries Entry Commission, Juneau, personal communication).

Gear Type	Year	Average ^a Price per Pound	Total Catch in Pounds	Total Value	Total Value in 1988 \$
Seine	77	1.93	88,636	171,365	334,516
	78	1.85	219,950	405,871	735,927
	79	1.31	140,394	183,916	299,731
	80	1.52	194,622	296,409	425,517
	81	1.97	165,599	325,762	423,706
	82	2.21	477,189	1,056,827	1,295,171
	83	1.08	218,215	235,236	279,303
	84	2.22	390,617	867,480	987,940
	85	1.75	382,251	667,119	733,582
	86	1.39	250,386	348,191	375,652
	87	1.77	87,388	154,502	160,811
	88	3.01	232,045	699,378	699,378
1977-1987 Average		1.73	237,750	428,425	550,169
Gillnet	77	1.36	57,863	78,741	153,708
	78	0.91	69,840	63,210	114,613
	79	1.34	107,013	143,397	233,696
	80	1.07	57,141	61,369	88,100
	81	1.18	61,496	72,770	94,649
	82	1.34	137,271	184,413	226,003
	83	0.77	44,523	34,435	40,886
	84	1.07	81,686	87,130	99,229
	85	1.07	97,610	104,140	114,515
	86	1.12	87,844	98,385	106,144
	87	1.45	99,649	144,292	150,184
	88	1.87	138,639	258,839	258,839
1977-1987 Average		1.15	81,994	97,480	129,248
Set Net	77	1.10	43,387	47,726	93,164
	78	1.17	58,612	68,576	124,342
	79	1.34	88,961	119,208	194,275
	80	1.07	60,509	64,987	93,294
	81	1.58	46,038	72,556	94,371
	82	1.48	27,030	39,923	48,927
	83	0.63	15,158	9,474	11,249
	84	1.05	20,101	21,106	24,037
	85	1.15	20,937	24,140	26,545
	86	0.78	24,670	19,243	20,761
	87	1.69	31,660	53,537	55,723
	88	2.23	15,916	35,431	35,431
1977-1987 Average		1.19	39,733	49,134	71,517
Hand Troll	77	1.94	481,916	937,290	1,829,652
	78	1.97	829,316	1,630,542	2,956,505
	79	2.26	834,165	1,889,145	3,078,768
	80	2.03	724,443	1,473,858	2,115,834
	81	2.37	527,743	1,248,344	1,623,672
	82	2.60	564,187	1,465,598	1,796,131
	83	1.84	566,484	1,044,838	1,240,570
	84	2.82	531,440	1,496,389	1,704,181
	85	2.39	483,724	1,158,035	1,273,407
	86	2.04	443,852	905,902	977,348
	87	2.86	492,609	1,408,674	1,466,196
	88	3.88	485,745	1,885,823	1,885,823
1977-1987 Average		2.28	589,080	1,332,601	1,823,842
Power Troll	77	1.96	3,497,787	6,861,078	13,393,278
	78	2.00	4,954,157	9,920,034	17,987,042
	79	2.31	4,304,181	9,947,047	16,210,850
	80	2.08	4,099,129	8,515,024	12,223,959
	81	2.40	3,578,036	8,591,720	11,174,913
	82	2.79	3,434,414	9,591,844	11,755,069
	83	1.89	3,778,955	7,123,785	8,458,301
	84	2.84	3,310,071	9,385,383	10,688,657
	85	2.39	3,010,973	7,208,269	7,926,411
	86	2.08	3,650,866	7,582,485	8,180,495
	87	2.77	4,167,339	11,547,689	12,019,231
	88	3.91	3,198,989	12,523,992	12,523,992
1977-1987 Average		2.32	3,798,719	8,752,214	11,819,837

- Continued -

Appendix C.3. (Page 2 of 2).

Gear Type	Year	Average ^a Price per Pound	Total Catch in Pounds	Total Value	Total Value in 1988 \$
Trap	77	1.98	1,022	2,024	3,951
	78				
	79				
	80				
	81	0.42	1,443	605	787
	82	2.23	11,630	25,970	31,827
	83				
	84				
	85	2.43	6,788	16,508	18,153
	86	1.60	2,100	3,364	3,629
	87				
	88				
1977-1987 Average		1.73	4,597	9,694	11,669
Combined Gear Types	77	1.94	4,170,611	8,098,224	15,808,269
	78	1.97	6,131,875	12,088,233	21,918,429
	79	2.24	5,474,714	12,282,713	20,017,319
	80	2.03	5,135,844	10,411,647	14,946,704
	81	2.35	4,380,355	10,311,757	13,412,098
	82	2.66	4,651,721	12,364,575	15,153,127
	83	1.83	4,623,335	8,447,768	10,030,309
	84	2.74	4,333,915	11,857,488	13,504,044
	85	2.29	4,002,283	9,178,211	10,092,614
	86	2.01	4,459,718	8,957,570	9,664,029
	87	2.73	4,878,645	13,308,694	13,852,145
	88	2.98	4,071,334	15,403,463	15,403,463
1977-1987 Average		2.25	4,749,365	10,664,262	14,399,917

^a Average price is weighted by the total pounds for each port delivered to.

Appendix C.4. Estimates of total escapements of chinook salmon to escapement indicator systems to Southeast Alaska and transboundary rivers, 1975-1988. Index escapements are expanded for survey counting rates and unsurveyed tributaries (see Mecum 1990 for tributary expansion factors).

Year	Major Systems				Medium Systems							Minor Systems			Total All Systems
	Alsek	Taku	Stikine	Major Total	Situk	Chilkat	Andrew	Unuk	Chick-amin	Blossom	Keta	Medium Total	King Salmon	Minor Total	
1975	4,214	4,609	5,800	14,623	1,510	187	416	1,469	588	234	325	6,080	53	1,166	21,869
1976	1,802	8,278	3,300	13,380	1,433	223	404	1,469	147	109	134	5,039	81	1,782	20,201
1977	4,522	10,000	6,600	21,122	1,732	223	456	1,558	363	179	368	6,273	168	3,696	31,091
1978	4,181	4,987	5,200	14,368	814	214	388	1,770	290	229	627	5,570	71	1,562	21,500
1979	6,678	6,593	9,328	22,599	1,400	214	327	922	224	86	682	4,956	89	1,958	29,513
1980	3,886	13,402	17,096	34,384	905	214	281	1,626	418	142	307	5,005	88	1,936	41,325
1981	3,067	17,900	26,672	47,639	702	1,143	511	1,170	614	254	526	6,326	113	2,486	56,451
1982	3,077	8,398	22,640	34,115	434	799	635	2,162	1,015	552	1,206	8,747	286	6,292	49,154
1983	3,495	3,020	4,752	11,267	592	1,103	366	1,800	922	942	1,315	9,051	245	5,390	25,708
1984	2,594	6,307	8,282	17,183	1,726	2,045	355	2,939	1,622	813	976	13,469	248	5,445	36,097
1985	2,277	10,851	10,227	23,355	1,521	625	510	1,861	1,531	1,134	998	10,517	146	3,212	37,084
1986	4,073	12,178	11,572	27,823	2,067	129	1,131	3,402	2,683	2,045	1,104	16,150	245	5,390	49,363
1987	4,086	8,951	19,108	32,145	1,884	1,286	1,042	3,157	1,560	2,158	1,229	15,834	193	4,246	52,225
1988	3,105	13,411	29,168	45,684	885	781	752	2,794	1,258	614	920	10,291	206	4,532	60,507
1975-1987															
Average	3,689	8,883	11,583	24,154	1,286	647	525	1,947	921	683	754	8,694	156	3,428	36,275

APPENDIX D
AGING CRITERIA

Appendix D.1. Criteria for determining freshwater age of chinook salmon (from Van Alen and McPherson, ADF&G, Division of Commercial Fisheries, Juneau, Alaska, personal communication).

Sum of scores <0 = Age 0. and >0 = Age 1.:

Criteria	Age 0.		Inconclusive	Age 1.	
	-2	-1	0	+1	+2
Freshwater Annulus	-No FW annulus visible inside of transition zone -FW circuli evenly spaced	-Slight irregularities in circuli width and spacing without the obvious narrowing, pinching, and braiding typical of a clear FW annulus	-Several checks in FW zone, none strong enough to indicate an annulus	-One or more moderately strong checks in FW zone -Possible FW annulus confused w/ transition check. -FW circuli are different (finer and denser) than circuli of marine growth	-Distinct FW annulus as evidenced by narrowing, pinching, and braiding circuli distinct from circuli in the transition zone -FW circuli are distinctly different than marine growth circuli, this is exemplified in a "cut out" pattern
Caliper Measurement (The distance between the 1st and 2nd marine annuli (measured on a radius bisecting the focus), moved inward one scale year, and scored according to placement of the focal endpoint)	-Measurement falls on or beyond focus on all radii measured	-Measurement falls less than half the distance from the focus to the last FW circuli -Measurement may fall on or beyond the focus on some radii		-Measurement falls over half way between focus and the strongest FW check	-Measurement falls on or near strong FW check
Distance and Spacing (Comparison of circuli in 1st marine summer with those in second marine summer)	-Circuli on the inside of the 1st marine summer are distinctly closer and narrower than those in the 2nd marine summer -Indistinct 1st marine annulus which circuli resembles those in 1st marine summer -Often two or more checks inside of 1st marine annulus	-Circuli on either side of the 1st marine annulus are different but not as distinct as in the -2 category -Non-uniform growth through 1st marine year, occasionally growth differs between dorsal and ventral sides of the scale		-Circuli are generally equal/uniform between the 1st and 2nd marine summers -Moderately distinct 1st marine annulus	-Circuli are equal between the 1st and 2nd marine annular zones -Distinct 1st marine annulus

Definitions of Aging Terms

Annuli - winter growth as evidenced by a decrease in width and spacing of circuli and pinching and braiding of circuli.
 Check - any alteration in circuli spacing including narrowing, pinching, and braiding. Checks include annuli, transition zones, and other growth disturbances resulting from food limitations, injury, changing hatchery rearing conditions, etc.
 Cut out pattern - When there are many (>20) FW circuli that are distinctly narrower and denser than circuli of 1st marine summer growth.
 FW - freshwater growth zone from the focus to the last circuli in freshwater.
 Plus growth zone - the scale growth zone from the end of the last FW annulus to the last circuli of FW.
 Transition zone - the scale zone coinciding with migration from freshwater to marine environments.

The Alaska Department of Fish and Game conducts all programs and activities free from discrimination on the basis of sex, color, race, religion, national origin, age, marital status, pregnancy, parenthood, or disability. For information on alternative formats available for this and other department publications, please contact the department ADA Coordinator at (voice) 907-465-4120, (TDD) 1-800-478-3648, or (fax) 907-586-6595. Any person who believes he or she has been discriminated against by this agency should write to: ADF&G, P.O. Box 25526, Juneau, AK 99802-5526; or O.E.O., U.S. Department of the Interior, Washington, DC 20240.